



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 02 2005

REPLY TO THE ATTENTION OF
SR-6J

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

International Paper Company
c/o Richard R. Rothman, Esq.
Bingham McCutchen, LLP
Suite 4400
355 South Grand Avenue
Los Angeles, CA 90071-3106

EPA Region 5 Records Ctr.



243415

Re: Unilateral Administrative Order for St. Regis Paper Company
Site, Cass Lake, MN - Interim Remedial Action

Dear Mr. Rothman:

Enclosed please find a Unilateral Administrative Order issued by the U.S. Environmental Protection Agency ("U.S. EPA") under Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"), 42 U.S.C. §9601, et seq.

Please note that the Order allows an opportunity for a conference if requested within 5 days after issuance of the Order, or if no conference is requested, an opportunity to submit comments within 5 days of issuance of the Order.

If you have any questions regarding the Order, feel free to contact Mony Chabria or Tom Turner, Associate Regional Counsels, at (312)886-6842 or (312) 886-6613, respectively, or Tim Drexler, Remedial Project Manager, at (312) 353-4367.

Sincerely yours,

Richard C. Karl, Director
Superfund Division

Enclosure

cc: State Agency Superfund Program Manager
Tribal Environmental Officer - Leech Lake Band of Ojibwe

bcc: Docket Analyst, ORC (C-14J)
Tom Turner, ORC (C-14J)
Mony Chabria, ORC (C-14J)
Tim Drexler, RPM (SR-5J)
John Maritote, EESS (SE-5J)
Denise Mahoney, EESS (SE-5J)
Jane Neumann, (SE-4J)
Barbara Wester, ORC (C-14J)
Don DeBlasio, OPA (R-19J)
Fushi Cai, EESS (SE-5J)
Denise Battaglia, Public Affairs (P-19J) w/o attachments
Michael T. Chezick, Department of Interior
Tony Audia, PAAS (MF-10J)
Records Center (SMR-7J)
Jeanne Griffin (SE-4J)

1. This Order directs Respondent to perform a remedial action for the remedy described in the Interim Record of Decision for the St. Regis Paper Company Superfund Site, Operable Unit No. 7, signed October 14, 2005. This Order is issued to Respondent by the United States Environmental Protection Agency ("U.S. EPA") under the authority vested in the President of the United States by § 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of U.S. EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926), and was further delegated to Regional Administrators by EPA Headquarters Delegation No. 14-14-A, and by EPA Headquarters Delegation No. 14-14-B, and was further delegated by the Regional Administrator of Region 5 to the Director, Superfund Division, by Region 5 Delegation Nos. 14-14-A and 14-14-B.

II. PARTIES BOUND

2. This Order shall apply to and be binding upon Respondent and its heirs, receivers, trustees, successors and assigns. Respondent is jointly and severally responsible for carrying out all activities required by this Order. No change in the ownership, corporate status, or other control of Respondent shall alter any of Respondent's responsibilities under this Order.

3. Respondent shall provide a copy of this Order to any prospective owners or successors before a controlling interest in Respondent's assets, property rights, or stock are transferred to the prospective owner or successor. Respondent shall provide a copy of this Order to each contractor, subcontractor, laboratory, or consultant retained to perform any work under this Order, within five days after the effective date of this Order or on the date such services are retained, whichever is later. Respondent shall also provide a copy of this Order to any person acting on behalf of Respondent with respect to the Site or the work and shall ensure that all contracts and subcontracts entered into hereunder require performance under the contract to be in conformity with the terms and work required by this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to the Respondent within the meaning of § 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondent is responsible for compliance with this Order and for ensuring that its contractors, subcontractors and agents perform all work in accordance with this Order.

4. Not later than thirty (30) days prior to any transfer of any interest in any real property included within the Site, Respondent shall submit a true and correct copy of the transfer documents to U.S. EPA, and shall identify the transferee(s) by name, principal business address and effective date of the transfer.

III. DEFINITIONS

5. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

b. "Day" shall mean a calendar day unless expressly stated to be a working day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the end of the next working day.

c. "Interim Record of Decision" or "Interim ROD" shall mean the U.S. EPA Interim Record of Decision relating to the Site, Operable Unit 7, signed on October 14, 2005, by the Superfund Division Director, U.S. EPA, Region 5, and all attachments thereto, which is attached hereto and made a part hereof as Attachment 1.

d. "LLB-DRM" shall mean the Leech Lake Band of Ojibwe Division of Resource Management.

e. "MPCA" shall mean the Minnesota Pollution Control Agency.

f. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to § 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

g. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

h. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations, identified in the Interim Record of Decision and Statement of Work, that the remedial action and work required by this Order must attain and maintain.

i. "Response Costs" shall mean all costs, including direct costs, indirect costs, and interest incurred by the United States to perform or support response actions at the Site, including, but not limited to, contract and enforcement costs.

j. "Section" shall mean a portion of this Order identified by a Roman numeral and includes one or more paragraphs.

k. "Section 106 Administrative Record" shall mean the Administrative Record which includes all documents considered or relied upon by U.S. EPA in preparation of this Order. The Section 106 Administrative Record Index is a listing of all documents included in the Section 106 Administrative Record, and is attached hereto as Appendix 1.

l. "Site" shall mean the St. Regis Paper Company Superfund Site, encompassing approximately 145 acres, located in section 15, T145N, R31W in Cass Lake, Cass County, Minnesota, within the exterior boundaries (as recognized by the United States Department of the Interior, Bureau of Indian Affairs, 67 Fed. Reg. 46330 (July 12, 2002)) of the Leech Lake Indian Reservation, as described in the Interim Record of Decision. The Site includes, but is not limited to, all property which has been contaminated as a result of a release from the facility and areas adjacent thereto.

m. "State" shall mean the State of Minnesota.

n. "Tribe" shall mean the Leech Lake Band of Ojibwe of Cass Lake, Minnesota, a sovereign political entity, federally recognized by the 1984 U.S. EPA Indian Policy and Sections 103, 104, 105, and 126 of CERCLA, 42 U.S.C. § 9603, 9604, 9605, and 9629, and the United States Department of the Interior, Bureau of Indian Affairs, 67 Fed. Reg. 46330 (July 12, 2002).

o. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the remedial action and operation and maintenance at the Site, as set forth in Attachment 2 to this Order. The Statement of Work is incorporated into this Order and is an enforceable part of this Order.

p. "Work" shall mean all activities Respondent is required to perform under this Order and all attachments hereto, to implement the Interim ROD, including, but not limited to, remedial action and operation and maintenance, and any other related activities required to be undertaken pursuant to this Order.

IV. DETERMINATIONS

6. The St. Regis Paper Company Site is located in section 15, T145N, R31W in Cass Lake, Minnesota (Cass County). Portions of the Site were leased from BNSF Railway Company (BNSF), portions of the Site were and are owned by the St. Regis Paper Company (and its corporate successors) and portions of the City Dump Area of the Site were and are owned by the City of Cass Lake. This Site is located within the exterior boundaries (as recognized by the United States Department of the Interior, Bureau of Indian Affairs, 67 Fed. Reg. 46330 (July 12, 2002)) of the Leech Lake Band's Tribal Reservation.

7. On January 31, 1985, Champion International Corporation and the St. Regis Paper Company merged. In June 2000, International Paper Company acquired the stock of Champion International Corporation (Champion).

8. The Site includes areas where former wood preserving operations occurred beginning in the late 1950s. The operations areas include the northwest storage area which is bounded by the BNSF railroad tracks to the north, Highway 371 to the west, east from Highway 371 approximately 5000 ft., and South to South 3rd Street. Another former operations area, the southwest area, is approximately 200 ft. south of South 3rd Street, extends south approximately 1200 ft. and is bounded by Highway 371 on the east and the Leech Lake Band of Ojibwe fish hatchery to the west.

9. The wood treating process at the Site primarily consisted of pressure treating wood with creosote and pentachlorophenol (PCP). Dioxins/furans occur as impurities in commercial formulations of PCP and, therefore, are present in the wood-treating agents. From 1969 to 1971, ammoniacal copper arsenate (ACA) was used for wood preserving. The active ingredients in ACA were copper (II) oxide and arsenic pentoxide.

10. Wastewater generated as a result of the wood treating operations was discharged to wastewater disposal ponds on the Site between 1957 and 1971. These ponds were covered with

sand and replaced by a new wastewater disposal pond which was utilized for the same purpose until 1980. Water from this new pond was used to spray-irrigate grass directly south of the pond and in the southwest area of the Site. The pond was also dredged on one occasion and the dredged material was placed around the pond. After 1980, wastewater from the process waste either evaporated in tanks designed for that purpose, was disposed in a manhole located within the Chippewa National Forest that lead to the City of Cass Lake sewage treatment facility, or was reused in the wood treating process.

11. Sludges from the Wood Treatment Facility Area were disposed of at a landfill located on the eastern edge of the Site and in a pit located in the Cass Lake City Dump. Sludges and waste oil from the site were periodically burned at the City Dump.

12. In 1977, the St. Regis Paper Company installed groundwater monitoring wells at the Site. Based on the results of groundwater monitoring, the Minnesota Pollution Control Agency (MPCA) determined that hazardous substances had been released from the Site. Monitoring wells revealed the presence of pentachlorophenol (PCP); polycyclic aromatic hydrocarbons (PAHs); phenols; hexa-, Hepta-, and Octochlorodibenzo-p-dioxin (collectively called PCDD); Polychlorinated dibenzo-p-furans (PCDF); and metals.

13. a. Respondent International Paper Company (or its corporate predecessors) is now, and has been since at least 1957, the owner of the Facility.

b. Respondent International Paper Company (or its corporate predecessors) was, from 1957 until 1985, the operator of the Facility. During that time hazardous substances, including some or all of those described in this section, were disposed of at the Facility.

c. Respondent International Paper Company (or its corporate predecessors) arranged, by contract or agreement or otherwise, for the disposal or treatment of hazardous substances owned or possessed by Respondent, or by any other person or entity at a facility and the hazardous substances were treated or disposed at the Facility. Hazardous substances of the same kind as

those owned or possessed by Respondent International Paper Company are contained at the Facility.

14. On September 21, 1984, (49 Fed. Reg. 37070), pursuant to § 105 of CERCLA, 42 U.S.C. § 9605, U.S. EPA placed the St. Regis Paper Company Superfund Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B. To study and undertake response activities in phases, U.S. EPA has divided the Site into operable units. This Order addresses Operable Unit No.7. Operable Unit No. 7 consists of a group of homes located south of the BNSF railroad tracks, east of Route 371, north of that portion of the Chippewa National Forest due south of the City of Cass Lake, and west of the Pike Bay/Cass Lake water system. A map of the area is attached as Attachment 3 to this Order.

15. In February 1985, MPCA and Champion reached an agreement on remedial measures to be implemented in order to address the threat to public health and the environment posed by the Site. MPCA and Champion signed two Response Orders by Consent under the Minnesota Environmental Response and Liability Act (MERLA), one for the Wood Treatment Facility Area and one for the City Dump Pit Area. These Orders provided for the following: (1) A Remedial Investigation at the Site; (2) A Feasibility Study; (3) Development and Implementation of the Response Action Plan to abate or minimize the release of hazardous substances from the Site; and, (4) Routine monitoring to determine the effectiveness of the implemented response actions.

16. On March 5, 1986, MPCA issued a Minnesota Enforcement Decision Document (MEDD) for the Wood Treatment Facility Area. The MEDD called for: (1) the installation of ten (10) ground water wells with granular activated carbon treatment which would pump and treat contaminated ground water until acceptable levels in ground water are reached; (2) the construction of a Resource Conservation and Recovery Act (RCRA) on-site containment vault for the disposal of hazardous waste sludges and contaminated soil to be excavated during source removal activities; (3) the extension of the Cass Lake Community Water System to residents not currently serviced and potentially affected by ground water contamination from the Site; (4) long

term monitoring of the ground water and surface water to determine the effectiveness of the ground water pump out system; (5) long term monitoring of the site containment vault; (6) long term monitoring of the treated ground water discharge and selected fish species to determine the effectiveness of the ground water treatment system; (7) long term operation and maintenance of the ground water pump out system; and (8) long term operation and maintenance of the on site containment vault.

17. On July 29, 1986, MPCA issued a MEDD for the City Dump Pit Area. The MEDD called for (1) long-term operation and maintenance of a contaminated groundwater gradient control system, with a pump out and treatment system that will prevent migration of contaminated groundwater; and (2) long-term monitoring to assess response action performance.

18. On January 24, 1995, U.S. EPA issued a CERCLA Section 106 Unilateral Administrative Order (UAO) to Champion for continued performance of response, remedial and long term oversight and maintenance activities at the Site. Champion and IP have complied with the 1995 UAO.

19. In March 1995, MPCA (on behalf of U.S. EPA) performed a 5-year review of the Response Actions (RAs) implemented at the Site and stated that until additional soil evaluation was performed, that element of the remedial action could not be determined to be protective. The 5-year review identified issues concerning the RAs and recommended, in part, the following steps:

- a) Additional surface and subsurface soil sampling at the Site, particularly in areas no longer owned by the responsible party.
- b) Surface water, groundwater and sediment sampling in the groundwater discharge areas.
- c) Additional monitoring of the groundwater plumes in both the former operations area and the city dump area.

- d) An ecological evaluation of the former operations area, city dump area, and Cass Lake/Pike Bay ecosystem, including sampling of soil, sediment, and surface water if significant contamination is found.

20. In September 2000, U.S. EPA performed a second five-year review. The 2000 five-year review also recommended additional site soil, groundwater, sediment, and surface water sampling. In addition, human health and ecological risk assessments were recommended to determine the protectiveness of the remedial actions performed. Additional monitoring wells were also recommended.

21. In October 2001, U.S. EPA and the Leech Lake Band of Ojibwe performed an initial field investigation at the Site to further evaluate issues raised as a result of the 2000 five-year review. The investigation involved preliminary sampling of surface soil, surface water, groundwater, sediment and fish tissue collected from the northwest storage area, the southwest area, the city dump, and the Fox Creek/Cass Lake/Pike Bay ecosystem. These sampling activities indicated the following:

- a) Sample values of up to 3320 ng/kg (TEQ) for dioxin, in the soil of the former southwest operations area.
- b) Sample values of up to 7160 ng/kg (TEQ) for dioxin, in the soil of the former northwest storage area adjacent to residential properties in Operable Unit 7.
- c) Sample values of up to 5.4 ng/kg (TEQ) for dioxin in fish tissue in the Fox Creek/Cass Lake/Pike Bay ecosystem.
- d) Sample values of up to 23 mg/kg for pentachlorophenol in the soil of the southwest area.
- e) Sample values of up to 480 ng/kg (TEQ) for dioxin in the soil of residential properties within Operable Unit 7.
- f) Sample values of up to 1.9 mg/kg for pentachlorophenol in the soil of residential properties adjacent to the Site.

- g) Sample values of up to 1,100 ug/kg for benzo-a-pyrene in the soil of residential properties adjacent to the Site.
- h) Sample values of up to 3.8 mg/kg for benzo-a-pyrene in the sediment of the Fox Creek/Cass Lake/Pike Bay ecosystem.
- i) Sample values of up to 523 mg/kg for copper in the sediment of the Fox Creek/Cass Lake/Pike Bay ecosystem.

22. Human impacts from exposure to dioxin include cancer and eye, skin, liver, kidney, and reproductive system damage.

23. During July and August 2003, U.S. EPA issued a CERCLA UAO directing (and IP conducted) confirmation soil sampling in the northwest storage area of the Site. This sampling confirmed the results of the 2001 sampling.

24. The 2001 and 2003 sampling resulted in a further U.S. EPA CERCLA UAO to IP dated December 17, 2003. In that Order, U.S. EPA cited an actual or threatened release of hazardous substances as a basis for a soil removal action in the northwest storage area.

25. On August 11, 2004, U.S. EPA issued a CERCLA UAO to IP to conduct a human health and ecological risk assessment. Indoor residential dust sampling was conducted as part of the risk assessment. In October 2004, samples of house dust were collected from 10 of approximately 40 homes in close proximity to the Site. Work on the risk assessment is ongoing.

26. In August 2005, U.S. EPA entered into a CERCLA Administrative Settlement Agreement and Consent Order with BNSF Railway Company to accomplish a soil removal action on property owned by BNSF Railway Company.

27. Pursuant to § 117 of CERCLA, 42 U.S.C. § 9617, U.S. EPA published notice of the proposed plan for interim remedial action on May 29, 2005, and provided opportunity for public

comment on the proposed interim remedial action. Similarly, Respondent was given an opportunity to comment on the proposed plan for interim remedial action and to supplement the Administrative Record regarding a decision for selection of the final plan for remedial action.

28. The decision by U.S. EPA on the interim remedial action to be implemented at the St. Regis Paper Company Site, Operable Unit 7, is embodied in an Interim Record of Decision ("Interim ROD"), executed on October 14, 2005, on which the State and Tribe has given their concurrence. The Interim ROD is an enforceable part of this Order and is attached hereto as Attachment 1. The Interim ROD is supported by an Administrative Record which contains the documents and information upon which U.S. EPA based the selection of the response action. The U.S. EPA's selected response action set out in the Interim ROD has been determined to provide adequate protection of public health, welfare and the environment; meet all federal and State environmental laws; and be cost effective. U.S. EPA believes that the response action set out in the Interim ROD for Operable Unit 7 will be consistent with the final remedy.

29. The analytical results of the house dust sample collection conducted in October 2004 show that values for dioxin and arsenic in homes exceeded the residence-specific screening values developed for indoor settled dust of 2 ng/m² for dioxin and 0.4 mg/m² for arsenic. Residence-specific values for dioxin exceeded the screening value in five of the ten sampled homes and residence-specific values for arsenic exceeded the screening value in four of the ten sampled homes. The results of this house dust sampling demonstrated a correlation between soil dioxin values and in-house dust values.

30. Residents of the homes in Operable Unit 7 are at risk from contaminated house dust through ingestion, inhalation and direct dermal contact.

31. Human impacts from exposure to arsenic include cancer and liver, kidney, skin, and lung damage.

32. The interim remedy selected includes the following actions for the approximately 40 homes in Operable Unit 7: (1) removal and replacement of carpeting, (2) initial and periodic housecleaning for dust removal, and (3) clean soil and grass cover for all yards. The interim remedy also includes the placement of dust suppression to the local unpaved streets within Operable Unit 7. A more complete statement of the selected interim remedy is found in the Interim ROD which is attached hereto as Attachment 1.

33. The removal and replacement of carpeting and dust cleaning of homes will address the major reservoirs of contaminated dust inside the homes. Replacement of carpeting is more practical than cleaning to address contaminated dust, especially in older carpet. Due to the correlation between soil contamination and house dust contamination, the soil and grass cover will reduce the risk of re-contamination of the cleaned homes. The periodic housecleaning will also address the risk of re-contamination. Dust suppression actions on the unpaved streets of Operable Unit 7 will control dust emissions from automobile use on these streets and transport of dust to residences.

34. The St. Regis Paper Company Superfund Site is a "facility" as defined in § 101(9) of CERCLA, 42 U.S.C. § 9601(9).

35. The Respondent is a "person" as defined in § 101(21) of CERCLA, 42 U.S.C. § 9601(21).

36. The Respondent is a liable party as defined in § 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is subject to this Order under § 106(a) of CERCLA, 42 U.S.C. § 9606(a).

37. "Hazardous substances" as defined in § 101(14) of CERCLA, 42 U.S.C. § 9601(14) are present at the Site.

38. These hazardous substances have been and are being "released" from the Facility as that term is defined in § 101(22) of CERCLA, 42 U.S.C. § 9601(22).

39. The past disposal and migration of hazardous substances from the Facility constitutes a "release" and the potential for future migration of hazardous substances from the Site poses a threat of a "release" as defined in § 101(22) of CERCLA, 42 U.S.C. § 9601(22).

40. The release or threat of release of one or more hazardous substances from the Facility is or may be presenting an imminent and substantial endangerment to the public health or welfare or the environment.

41. The actions required by this Order are necessary to protect the public health, welfare, or the environment and are consistent with the National Contingency Plan, as amended, and CERCLA.

V. NOTICE TO THE TRIBE AND STATE

42. U.S. EPA has notified the Leech Lake Band of Ojibwe, Division of Resource Management, and State of Minnesota Pollution Control Agency, that U.S. EPA intends to issue this Order. U.S. EPA will consult with the Tribe and State and the Tribe and State will have the opportunity to review and comment to U.S. EPA regarding all work to be performed, including reports, technical data and other deliverables, and any other issues which arise while the Order remains in effect.

VI. ORDER

43. Based on the foregoing, Respondent is hereby ordered to comply with all of the provisions of this Order, including but not limited to all attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines contained in this Order, attached to this Order, or incorporated by reference into this Order.

VII. WORK TO BE PERFORMED

44. All workplans, reports, and other deliverables (workplans and deliverables), as described throughout this Order, shall be submitted to LLB-DRM and MPCA (except documents claimed

to contain confidential business information), and U.S. EPA. All workplans and deliverables will be reviewed and either approved, approved with modifications, or disapproved by U.S. EPA, in consultation with LLB-DRM and MPCA. In the event of approval or approval with modifications by U.S. EPA, Respondent shall proceed to take any action required by the workplan, report, or other item, as approved or modified by U.S. EPA. If the workplan or other deliverable is approved with modifications or disapproved, U.S. EPA will provide, in writing, comments or modifications required for approval. Respondent shall amend the workplan or other deliverable to incorporate only those comments or modifications required by U.S. EPA. Within five (5) days of the date of U.S. EPA's written notification of approval with modifications or disapproval, Respondent shall submit an amended workplan or other deliverable. U.S. EPA shall review the amended workplan or deliverable and either approve or disapprove it. Failure to submit a workplan, amended workplan or other deliverable shall constitute noncompliance with this Order. Submission of an amended workplan or other deliverable which fails to incorporate all of U.S. EPA's required modifications, or which includes other unrequested modifications, shall also constitute noncompliance with this Order. Approval by U.S. EPA of the (amended) workplan or other deliverable shall cause said approved (amended) workplan or other deliverable to be incorporated herein as an enforceable part of this Order. If any (amended) workplan or other deliverable is not approved by U.S. EPA, Respondent shall be deemed to be in violation of this Order.

45. In the event of an inconsistency between this Order and any subsequent approved (amended) workplan or other deliverable, the terms of this Order shall control.

Remedial Action

46. Within twenty-one (21) days of the effective date of this Order, Respondent shall submit a Remedial Action Workplan (RA Workplan) for review and approval. The RA Workplan shall be developed in accordance with the Interim ROD, and the Statement of Work. The RA Workplan shall include: (1) selection of the remedial action contractor; (2) a Construction Quality Assurance Plan; (3) identification of and satisfactory compliance with applicable permitting

requirements; (4) implementation of the Operation and Maintenance Plan; and (5) the Contingency Plan. The RA Workplan shall include a schedule for implementing all remedial action tasks identified in the Statement of Work and shall identify the initial formulation of Respondent's remedial action project team, including the supervising contractor. Respondent shall also submit to U.S. EPA a Health and Safety Plan for field activities required by the RA Workplan. The Health and Safety Plan for field activities shall conform to applicable Occupational Safety and Health Administration and U.S. EPA requirements, including but not limited to the regulations at 54 Fed. Reg. 9294.

47. Upon approval of the (Amended) RA Workplan by U.S. EPA, Respondent shall implement the (Amended) RA Workplan in accordance with any and all instructions from the RPM and in accordance with the schedules in the (Amended) RA Workplan. Unless otherwise directed by U.S. EPA, Respondent shall not commence remedial action at the Site prior to approval of the (Amended) RA Workplan. Any noncompliance with the approved (Amended) RA Workplan shall be a violation of this Order.

48. The work performed by Respondent pursuant to this Order shall, at a minimum, achieve the performance standards specified in the Interim Record of Decision and the Statement of Work. Nothing in this Order, or in U.S. EPA's approval of any (amended) workplan or other deliverable, shall be deemed to constitute a warranty or representation of any kind by U.S. EPA that full performance of the remedial action will achieve the performance standards set forth in the Interim ROD and in the Statement of Work. Respondent's compliance with such approved documents does not foreclose U.S. EPA from seeking additional work.

49. All materials removed from the Facility shall be disposed of or treated at a facility approved in advance of removal by U.S. EPA's RPM and in accordance with: 1) § 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3); 2) the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. § 6901, et seq., as amended; 3) the U.S. EPA "Revised Off-Site policy," OSWER Directive 9834.11, November 13, 1987; and 4) all other applicable federal, State,

Tribal, and local requirements. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for remedial action construction. Respondent shall provide written notice to the RPM which shall include all relevant information, including the information required by paragraph 50 below, as soon as practicable after the award of the contract and before the hazardous substances are actually shipped off-Site.

50. Prior to any off-site shipment of hazardous substances from the Site to an out-of-state waste management facility, Respondent shall provide written notification to the appropriate state environmental official in the receiving state and to U.S. EPA's Remedial Project Manager (RPM) of such shipment of hazardous substances. However, the notification of shipments to the state shall not apply to any off-Site shipments when the total volume of all shipments from the Site to the state will not exceed ten (10) cubic yards. The notification shall be in writing, and shall include the following information, where available: (1) the name and location of the facility to which the hazardous substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous substances; and (4) the method of transportation. Respondent shall notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

51. Respondent shall cooperate with U.S. EPA in providing information regarding the work to the public. When requested by U.S. EPA, Respondent shall participate in the preparation of such information for distribution to the public and in public meetings which may be held or sponsored by U.S. EPA to explain activities at or relating to the Site.

52. Within thirty (30) days after Respondent concludes that the work described in the Statement of Work, except the periodic housecleaning, has been fully performed, Respondent shall so notify U.S. EPA and shall schedule and conduct a pre-certification inspection to be attended by Respondent and U.S. EPA. The pre-certification inspection shall be followed by a written report submitted within thirty (30) days of the inspection by a registered professional

engineer and Respondent's Project Coordinator certifying that the work, except the periodic housecleaning, has been completed in full satisfaction of the requirements of this Order. If, after completion of the pre-certification inspection and receipt and review of the written report, U.S. EPA determines that the work, except the periodic housecleaning, or any portion thereof has not been completed in accordance with this Order, U.S. EPA shall notify Respondent in writing of the activities that must be undertaken to complete such work and shall set forth in the notice a schedule for performance of such activities. Respondent shall perform all activities described in the notice in accordance with the specifications and schedules established therein. If U.S. EPA concludes, following the initial or any subsequent certification of completion by Respondent that the work, except the periodic housecleaning, has been fully performed in accordance with this Order, U.S. EPA may notify Respondent that such work has been fully performed. U.S. EPA's notification shall be based on present knowledge and Respondent's certification to U.S. EPA, and shall not limit U.S. EPA's right to perform periodic reviews pursuant to § 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of U.S. EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607.

VIII. PERIODIC REVIEW

53. Under § 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any applicable regulations, where hazardous substances will remain on Site at the completion of the remedial action, U.S. EPA may review the Site to assure that the work performed pursuant to this Order adequately protects human health and the environment. Until such time as U.S. EPA certifies completion of the work, Respondent shall conduct the requisite studies, investigations, or other response actions as determined necessary by U.S. EPA in order to permit U.S. EPA to conduct the review under § 121(c) of CERCLA. As a result of any review performed under this paragraph, Respondent may be required to perform additional work or to modify work previously performed.

IX. ADDITIONAL RESPONSE ACTIONS

54. In the event that U.S. EPA determines that additional work or modifications to work are necessary to meet performance standards, to maintain consistency with the final remedy, or to

otherwise protect human health or the environment, U.S. EPA will notify Respondent that additional response actions are necessary. U.S. EPA may also require Respondent to modify any plan or other deliverable required by this Order, including any approved modifications.

55. Within thirty (30) days of receipt of notice from U.S. EPA that additional response activities are necessary, Respondent shall submit for approval an Additional RA Workplan pursuant to paragraph 44 herein. The Additional RA Workplan shall conform to this Order's requirements for an RA Workplan. Upon U.S. EPA's approval of the (Amended) Additional RA Workplan, the (Amended) Additional RA Workplan shall become an enforceable part of this Order, and Respondent shall implement the (Amended) Additional RA Workplan for additional response activities in accordance with the standards, specifications, and schedule contained therein. Failure to submit an Additional RA Workplan shall constitute noncompliance with this Order.

X. ENDANGERMENT AND EMERGENCY RESPONSE

56. In the event of any event during the performance of the work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize the threat, and shall immediately notify U.S. EPA's RPM or alternate RPM. If neither of these persons is available Respondent shall notify the U.S. EPA Emergency Response Unit, Region 5. Respondent shall take further action in consultation with U.S. EPA's RPM and in accordance with all applicable provisions of this Order, including but not limited to the health and safety plan and the contingency plan. In the event that Respondent fails to take appropriate response action as required by this paragraph, and U.S. EPA takes that action instead, Respondent shall reimburse U.S. EPA for all costs of the response action not inconsistent with the NCP. Respondent shall pay the response costs in the manner described in section XIX (reimbursement of response costs) of this Order, within thirty (30) days of U.S. EPA's demand for payment.

57. Nothing in the preceding paragraph 56 shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XI. PROGRESS REPORTS

58. In addition to the other deliverables set forth in this Order, Respondent shall provide monthly progress reports to U.S. EPA, LLB-DRM, and MPCA with respect to actions and activities undertaken pursuant to this Order. The progress reports shall be submitted on or before the 10th day of each month following the effective date of this Order. Respondent's obligation to submit progress reports continues until U.S. EPA gives Respondent written notice under paragraph 94 of this Order. At a minimum these progress reports shall: (1) describe the actions which have been taken to comply with this Order during the prior month; (2) include all results of sampling and tests and all other data received by Respondent and not previously submitted to U.S. EPA; (3) describe all work planned for the next 90 days with schedules relating such work to the overall project schedule for RA completion; and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

XII. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

59. Respondent shall use the quality assurance, quality control, and chain of custody procedures described in the "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001) and "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA 600/R-98/018, February 1998), and any amendments to these documents, while conducting all sample collection and analysis activities required herein by any plan. To provide quality assurance and maintain quality control, Respondent shall:

a. Thirty (30) days prior to the planned commencement of any sampling and analysis under this Order, Respondent shall submit a Quality Assurance Project Plan (QAPP) to the U.S. EPA, MPCA, and LLB-DRM that is consistent with the SOW, (amended) work plans, U.S.

EPA's "Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans" (QAM-005/80), and any subsequent amendments.

b. Prior to the development and submittal of a QAPP, Respondent shall attend a pre-QAPP meeting sponsored by U.S. EPA to identify all monitoring and data quality objectives. U.S. EPA, after review of the submitted QAPP, will either approve, conditionally approve, or disapprove the QAPP. Upon notification of conditional approval or disapproval, Respondent shall make all required modifications to the QAPP within seven (7) days of receipt of such notification.

c. Use only laboratories which have a documented quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by U.S. EPA. U.S. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP) to meet the quality system requirements.

d. Ensure that the laboratory used by the Respondent for analyses, performs according to a method or methods deemed satisfactory to U.S. EPA and submits all protocols to be used for analyses to U.S. EPA at least 30 days before beginning analysis.

e. Ensure that U.S. EPA personnel and U.S. EPA's authorized representatives are allowed access to the laboratory and personnel utilized by the Respondent for analyses.

60. Respondent shall notify U.S. EPA, MPCA and LLB-DRM not less than fourteen (14) days in advance of any sample collection activity. At the request of U.S. EPA, Respondent shall allow U.S. EPA or its authorized representatives to take split or duplicate samples of any samples collected by Respondent with regard to the Site or pursuant to the implementation of this Order. In addition, U.S. EPA shall have the right to take any additional samples that U.S. EPA deems necessary.

XIII. COMPLIANCE WITH APPLICABLE LAWS

61. All activities by Respondent pursuant to this Order shall be performed in accordance with the requirements of all federal and State laws and regulations. U.S. EPA has determined that the activities contemplated by this Order are consistent with the National Contingency Plan.

62. Except as provided in § 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the work conducted entirely on-Site. Where any portion of the work requires a federal or State permit, Respondent shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

63. This Order is not and shall not be construed to be, a permit issued pursuant to any federal or State statute or regulation.

XIV. REMEDIAL PROJECT MANAGER

64. All communications, whether written or oral, from Respondent to U.S. EPA shall be directed to U.S. EPA's Remedial Project Manager. Respondent shall submit to U.S. EPA three (3) copies of all documents, including plans, reports, and other correspondence, which are developed pursuant to this Order, and shall send these documents by certified mail.

U.S. EPA's Remedial Project Manager is:

Tim Drexler
77 West Jackson Boulevard, Mail Code SR-5J
Chicago, Illinois 60604-3590
312-353-4367

65. U.S. EPA may change its Remedial Project Manager. If U.S. EPA changes its Remedial Project Manager, U.S. EPA will inform Respondent in writing of the name, address, and telephone number of the new Remedial Project Manager.

66. U.S. EPA's RPM shall have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the National Contingency Plan. U.S. EPA's RPM

shall have authority, consistent with the NCP, to halt any work required by this Order, and to take any necessary response action.

XV. PROJECT COORDINATOR AND CONTRACTORS

67. All aspects of the Work to be performed by Respondent pursuant to this Order shall be under the direction and supervision of a Project Coordinator qualified to undertake and complete the requirements of this Order. The Project Coordinator shall be the RPM's primary point of contact with the Respondent and shall possess sufficient technical expertise regarding all aspects of the work. Within fifteen (15) days after the effective date of this Order, Respondent shall notify U.S. EPA in writing of the name and qualifications of the Project Coordinator, including primary support entities and staff, proposed to be used in carrying out work under this Order. U.S. EPA reserves the right to disapprove the proposed Project Coordinator or any succeeding proposed Project Coordinator under this Order. With respect to any proposed Project Coordinator, Respondent shall demonstrate that the proposed Project Coordinator has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed Project Coordinator's Quality Management Plan (QMP), unless already submitted and accepted by U.S. EPA Region 5. The QMP should be prepared in accordance with the specifications set forth in "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002) or equivalent documentation as determined by U.S. EPA.

68. Within twenty-one (21) days after U.S. EPA approves the RA Workplan, Respondent shall identify a proposed construction contractor and notify U.S. EPA in writing of the name, title, and qualifications of the construction contractor proposed to be used in carrying out work under this Order. With respect to any proposed construction contractor, Respondent shall demonstrate that the proposed construction contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard,

January 5, 1995), by submitting a copy of the proposed construction contractor's Quality Management Plan (QMP), unless already submitted and accepted by U.S. EPA Region 5. The QMP should be prepared in accordance with the specifications set forth in "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002) or equivalent documentation as determined by U.S. EPA.

69. Respondent shall submit a copy of the construction contractor solicitation documents to U.S. EPA not later than five (5) days after publishing the solicitation documents. Upon U.S. EPA's request, Respondent shall submit complete copies of all bid packages received from all contract bidders.

70. a. At least seven (7) days prior to commencing any work at the Site pursuant to this Order, Respondent shall submit to U.S. EPA a certification that Respondent or its contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondent pursuant to this Order. Respondent shall ensure that such insurance or indemnification is maintained for the duration of the work required by this Order.

b. Respondent shall demonstrate its ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to U.S. EPA within twenty-one (21) days after the date of this Order, one of the following: (1) a performance bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) internal financial information to allow U.S. EPA to determine that Respondent has sufficient assets available to perform the Work. Respondent shall demonstrate financial assurance in an amount no less than the estimate of cost for the remedial action contained in the Interim Record of Decision for the Site. If Respondent seeks to demonstrate to complete the remedial action by means of internal financial information, or by guarantee of a third party, they shall re-submit such information annually, on the anniversary of the effective date of this Order. If U.S. EPA determines that such financial information is inadequate, Respondent shall, within twenty-one (21) days after receipt

of U.S. EPA's notice of determination, obtain and present to U.S. EPA for approval one of the other three forms of financial assurance listed above.

71. U.S. EPA retains the right to disapprove of the Project Coordinator and any contractor, including but not limited to construction contractors retained by the Respondent. In the event U.S. EPA disapproves a Project Coordinator or contractor, Respondent shall retain a new project coordinator or contractor to perform the work, and such selection shall be made within fifteen (15) days following the date of U.S. EPA's disapproval. If at any time Respondent proposes to use a new project coordinator or contractor, Respondent shall notify U.S. EPA of the identity of the new project coordinator or contractor at least fifteen (15) days before the new project coordinator or contractor performs any work under this Order.

XVI. SITE ACCESS AND DOCUMENT AVAILABILITY

72. a. Respondent will obtain, or use its best efforts to obtain, site access agreements from the present owners of the homes in Operable Unit 7, within thirty (30) days of the effective date of this Order. Said agreements shall provide access for U.S. EPA, its contractors and oversight officials, the State and its contractors, the Tribe and its contractors, and Respondent or Respondent authorized representatives and contractors. Said agreements shall specify that Respondent is not U.S. EPA's representative with respect to liability associated with Site activities. Copies of such agreements shall be provided to U.S. EPA prior to Respondent's initiation of field activities. If access agreements are not obtained within the time referenced above, Respondent shall immediately notify U.S. EPA of its failure to obtain access.

b. In the event that the Site, the off-Site area that is to be used for access, the property where documents required to be prepared or maintained by this Order are located, or other property subject to or affected by this response action, is owned in whole or in part by parties other than those bound by this Order, Respondent will obtain, or use its best efforts to obtain, site access agreements from the present owners, within thirty (30) days of the effective date of this Order. Said agreements shall provide access for U.S. EPA, its contractors and oversight officials, the State and its contractors, the Tribe and its contractors, and Respondent or Respondent's

authorized representatives and contractors. Said agreements shall specify that Respondent is not U.S. EPA's representative with respect to liability associated with Site activities. Copies of such agreements shall be provided to U.S. EPA prior to Respondent's initiation of field activities. Respondent's best efforts shall include providing reasonable compensation to any off-Site property owner. If access agreements are not obtained within the time referenced above, Respondent shall immediately notify U.S. EPA of its failure to obtain access.

73. If Respondent cannot obtain the necessary access agreements, U.S. EPA may exercise non-reviewable discretion and; (1) use its legal authorities to obtain access for the Respondent; (2) conduct response actions at the property in question; or (3) terminate this Order. If U.S. EPA conducts a response action and does not terminate the Order, Respondent shall perform all other activities not requiring access to that property. Respondent shall integrate the results of any such tasks undertaken by U.S. EPA into its reports and deliverables. Respondent shall reimburse U.S. EPA, pursuant to section XIX (reimbursement of response costs) of this Order, for all response costs (including attorney fees) incurred by the United States to obtain access for Respondent.

74. Respondent shall allow U.S. EPA and its authorized representatives and contractors to enter and freely move about all property at the Site and off-Site areas subject to or affected by the work under this Order or where documents required to be prepared or maintained by this Order are located, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondent and its representatives or contractors pursuant to this Order; reviewing the progress of the Respondent in carrying out the terms of this Order; conducting tests as U.S. EPA or its authorized representatives or contractors deem necessary; using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to U.S. EPA by Respondent. Respondent shall allow U.S. EPA and its authorized representatives to enter the Site, to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Order. Nothing herein shall limit U.S. EPA's right of entry or inspection authority under federal law, and U.S. EPA retains all of its information gathering and

enforcement authorities and rights under CERCLA, RCRA, and any other applicable statutes and regulations.

XVII. RECORD PRESERVATION

75. On or before the effective date of this Order, Respondent shall submit a written certification to U.S. EPA that they have not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to their potential liability with regard to the Site since the time of their notification of potential liability by U.S. EPA or the State. Respondent shall not dispose of any such documents without prior approval by U.S. EPA. Upon U.S. EPA's request, Respondent shall make all such documents available to U.S. EPA and shall submit a log of any such documents claimed to be privileged for any reason. This privilege log shall list, for each document, the date, author, addressees (including courtesy copies or "cc"s and "bcc"s) and subject matter of the document.

76. Respondent shall provide to U.S. EPA upon request, copies of all documents and information within their or their contractors', subcontractors' or agents' possession or control relating to activities at the Site or to the implementation of this Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, traffic routing, correspondence, or other documents or information. Respondent shall also make available to U.S. EPA their employees, agents, or representatives for purposes of investigation, information gathering or testimony concerning the performance of the work.

77. Until ten (10) years after U.S. EPA provides notice pursuant to paragraph 94 of this Order, Respondent shall preserve, and shall instruct their contractors and agents to preserve, all documents, records, and information of whatever kind, nature or description relating to the performance of the work. Upon the conclusion of this document retention period, Respondent shall notify the United States at least ninety (90) days prior to the destruction of any such records, documents or information, and, upon request of the United States, Respondent shall deliver all such documents, records and information to U.S. EPA.

78. Respondent may assert a claim of business confidentiality covering part or all of the information submitted to U.S. EPA pursuant to the terms of this Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with § 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondent at the time the claim is made. Information determined to be confidential by U.S. EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to U.S. EPA, it may be made available to the public by U.S. EPA, the State, or the Tribe without further notice to the Respondent. Respondent shall not assert confidentiality claims with respect to any data or documents related to Site conditions, sampling, or monitoring.

79. Respondent shall maintain, for the period during which this Order is in effect, an index of documents that Respondent claims contain confidential business information ("CBI"). The index shall contain, for each document, the date, author, addressee, and subject of the document. Respondent shall submit an updated copy of the index to U.S. EPA with each new document claimed to be CBI. The updated index shall also indicate any documents for which CBI claims have been withdrawn.

XVIII. DELAY IN PERFORMANCE

80. Any delay in performance of this Order according to its terms and schedules that is not properly justified by Respondent under the terms of this section shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent obligations to fully perform all obligations under the terms and conditions of this Order.

81. Respondent shall notify U.S. EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to U.S. EPA's RPM within forty eight (48) hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within seven (7) days after notifying U.S. EPA by telephone, Respondent shall provide

written notification fully describing the nature of the delay, any justification for delay, any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

XIX. REIMBURSEMENT OF RESPONSE COSTS

82. Respondent shall reimburse U.S. EPA, upon written demand, for all response costs *incurred by the United States in overseeing Respondent's implementation of the requirements of this Order.* U.S. EPA may submit to Respondent on a periodic basis an accounting of all oversight response costs incurred by the United States with respect to this Order. U.S. EPA's Itemized Cost Summary Reports, or such other summary as may be certified by U.S. EPA, shall serve as the accounting and basis for payment demands.

83. Respondent shall, within thirty (30) days of receipt of each U.S. EPA accounting, remit a certified or cashier's check for the amount of those costs. Interest shall accrue from the later of the date that payment of a specified amount is demanded in writing or the date of the expenditure. The interest rate is the rate established by the Department of the Treasury pursuant to 31 U.S.C. § 3717 and 4 C.F.R. § 102.13.

84. Checks shall be made payable to the "U.S. EPA Hazardous Substances Superfund" and *shall include the name of the Site, the Site identification number (05J2), the account number and the title of this Order.* Checks shall be forwarded to:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60673

Respondent shall send copies of each transmittal letter and check to the U.S. EPA's RPM.

XX. UNITED STATES NOT LIABLE

85. The United States and U.S. EPA are not to be construed as parties to, and do not assume any liability for, any contract entered into by the Respondent to carry out the activities pursuant to this Order. The proper completion of the work under this Order is solely the responsibility of the Respondent. The United States and U.S. EPA, by issuance of this Order, also assume no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondent, or its directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity required by this Order.

XXI. ENFORCEMENT AND RESERVATIONS

86. U.S. EPA reserves the right to bring an action against Respondent under § 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States and not reimbursed by Respondent. This reservation shall include but not be limited to past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in § 107(a) of CERCLA.

87. Notwithstanding any other provision of this Order, at any time during the response action, U.S. EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondent for its costs, or seek any other appropriate relief.

88. Nothing in this Order shall preclude U.S. EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as U.S. EPA may deem necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9601, et seq., or any other applicable law. This Order shall not affect any Respondent's liability under CERCLA § 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

89. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

90. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

91. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXII. ACCESS TO ADMINISTRATIVE RECORD

92. The Section 106 Administrative Record is available for review on normal business days between the hours of 8:00 a.m. and 4:00 p.m. at the U.S. EPA, Region 5, 77 West Jackson Boulevard Chicago, Illinois. An Index of the Administrative Record is attached hereto as Appendix 1.

XXIII. EFFECTIVE DATE AND TERMINATION

93. This Order shall become effective five (5) days after the date of issuance, unless a conference is requested as provided in paragraph 98. If a conference is requested, this Order shall become effective seven (7) days after the date of issuance.

94. Within thirty (30) days after Respondent concludes that all phases of the work have been fully performed, that the performance standards have been attained, and that all operation and maintenance activities have been completed, Respondent shall submit to U.S. EPA a written report by a registered professional engineer certifying that the work has been completed in full satisfaction of the requirements of this Order. U.S. EPA shall require such additional activities

as may be necessary to complete the work or U.S. EPA may, based upon present knowledge and Respondent's certification to U.S. EPA, issue written notification to Respondent that the work has been completed, as appropriate, in accordance with the procedures set forth in paragraph 52 for Respondent's certification of completion of the remedial action. U.S. EPA's notification shall not limit U.S. EPA's right to perform periodic reviews pursuant to § 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of U.S. EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607. The provisions of this Order shall be deemed to be satisfied when U.S. EPA notifies Respondent in writing that Respondent has demonstrated, to U.S. EPA's satisfaction, that all terms of the Order have been completed. This notice shall not, however, terminate Respondent's obligation to comply with section XVII of this Order (record preservation).

XXIV. NOTICE OF INTENT TO COMPLY

95. On or before the effective date of this Order, Respondent must submit to U.S. EPA a written notice stating its unequivocal intention to comply with all terms of this Order, together with the written notice required by paragraph 75. In the event Respondent fails to provide said written notice of its unequivocal intention to comply with this Order on or before the effective date, Respondent shall be deemed to have refused to comply with this Order. If Respondent fails to provide timely notice of its intent to comply with this Order, it shall thereafter have no authority to perform any response action at the Site, pursuant to §§ 104(a) and 122(e)(6) of CERCLA. In the event Respondent subsequently changes its decision and desires to acquire authority from U.S. EPA under §§ 104(a) and 122(e)(6) of CERCLA to undertake the work described in this Order, Respondent must provide the notice described in this paragraph 95 to U.S. EPA and receive from U.S. EPA written permission and authority to proceed with work under this Order.

XXV. PENALTIES

96. Respondent shall be subject to civil penalties under § 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than \$32,500 for each day in which Respondent violates, or fails or

refuses to comply with this Order without sufficient cause. In addition, failure to properly provide response action under this Order, or any portion hereof, may result in liability under § 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three times the amount of any costs incurred by the Fund as a result of such failure to take proper action.

XXVI. OPPORTUNITY TO COMMENT AND CONFER

97. On or before the effective date of this Order, Respondent may submit written comments to U.S. EPA. Respondent asserting a "sufficient cause" defense under § 106(b) of CERCLA shall describe the nature of the any "sufficient cause" defense using facts that exist on or prior to the effective date of this Order. The absence of a response by U.S. EPA shall not be deemed to be acceptance of Respondent's assertions.


98. Within three (3) days after the date of issuance of this Order, Respondent may request a conference with the U.S. EPA to discuss this Order. If requested, the conference shall occur within five (5) days of the date of issuance of this Order, at the office of U.S. EPA, Region 5, in Chicago, Illinois.

99. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Order and the extent to which Respondent intends to comply with this Order. This conference is not an evidentiary hearing and does not constitute a proceeding to challenge this Order. It does not give Respondent a right to seek review of this Order or to seek resolution of potential liability. No record of the conference (e.g. stenographic, tape or other physical record) will be made. At any conference held pursuant to Respondent's request, Respondent may appear in person or by an attorney or other representative. Requests for a conference must be by telephone followed by written confirmation to U.S. EPA's RPM.

ADMINISTRATIVE ORDER FOR ST. REGIS PAPER COMPANY SUPERFUND SITE

So Ordered, this 2ND day of DECEMBER, 2005.

BY: _____



for Richard C. Karl, Director
Superfund Division
U.S. Environmental Protection Agency, Region 5

Attachment 1

St. Regis Paper Company Site

Cass County, Minnesota

Interim Record of Decision



**United States
Environmental Protection Agency
Region 5
October 2005**

List of Acronyms and Abbreviations	iii
Part 1: The Declaration	1
Part 2: Decision Summary	4
Site Name, Location, and Description	4
Site History and Enforcement Activities	4
Community Participation	7
Scope and Role of Operable Unit	7
Site Characteristics	8
Current and Potential Future Site and Resource Uses	9
Site Risks	10
Remedial Action Objectives	11
Description of Alternatives:	12
Remedy Components	12
Common Elements and Distinguishing Features of Each Alternative	14
Overall Protection of Human Health and the Environment	15
Compliance with Applicable or Relevant and Appropriate Requirements	16
Long-Term Effectiveness and Permanence	16
Reduction of Toxicity, Mobility, or Volume Through Treatment	17
Short-term effectiveness	17
Implementability	17
Cost	18
Tribal and State Acceptance	18
Community Acceptance	18
Principal Threat Waste	18
Selected Interim Remedy:	18
Summary of the Rationale for the Selected Interim Remedy	18
Description of Selected Interim Remedy	19
Summary of Estimated Remedy Costs	20
Expected Outcomes of Selected Interim Remedy	20
Statutory Determinations	20
Documentation of Significant Changes	20
Part 3: Responsiveness Summary	22

Stakeholder Issues and Lead Agency Responses

22

Attachment A:	Revised House Dust Risk Calculations
Attachment B:	Site Map
Attachment C:	House Dust Sampling Map
Attachment D:	Cost Estimates
Attachment E:	Responsiveness Summary
Attachment F:	Administrative Record Index

List of Acronyms and Abbreviations

ACA	Ammoniacal copper arsenate
ARAR	Applicable and/or relevant and appropriate requirements
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COCs	Contaminants of Concern
EPA	U.S. Environmental Protection Agency
HAZMAT	Hazardous Materials
HEPA	High efficiency particulate air (filter)
IP	International Paper
LLB	Leech Lake Band of Ojibwe
MPCA	Minnesota Pollution Control Agency
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operations and Maintenance
OU	Operable Unit
PAHs	Poly-cyclic aromatic hydrocarbons
PCP	Pentachlorophenol
PPB	Parts per billion
RCRA	Resources Conservation and Recovery Act
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
UAO	Unilateral Administrative Order
WTC	World Trade Center

Interim Action Decision

Part 1: The Declaration

Site Name and Location

Site Name: St. Regis Paper Company Site

Location: Leech Lake Indian Reservation, City of Cass Lake, Cass County, State of Minnesota

Statement of Basis and Purpose

This decision document represents the Selected Interim Remedy for the St. Regis Paper Company Site (the Site) located within the exterior boundary of the Leech Lake Indian Reservation in Cass Lake, Minnesota. The Selected Interim Remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record file for this Site.

The Leech Lake Band of Ojibwe and the State of Minnesota concur with the Selected Interim Remedy.

Assessment of the Site

The response action selected in this Interim Record of Decision is necessary to protect the public health from actual or threatened releases of hazardous substances, as defined by Section 101(14) of CERCLA, 42 U.S.C. §9601 (14), into the environment.

Description of the Selected Interim Remedy

The Selected Interim Remedy was developed to specifically address house dust contamination in approximately 40 residences near the former operating area of the Site. An overall site strategy will be developed based on the conclusions of the human health and ecological risk assessments currently being developed by the responsible party under an August 2004 Unilateral Administrative Order issued by EPA. Performance standards for the Interim Action will be based on the successful completion of the components of the Selected Interim Remedy as follows:

- Remove and replace carpet
- Provide initial and periodic house cleaning for dust removal
- Cover yards with clean dirt fill and grass seed.
- Apply dust suppressant to residential dirt roads

The selected interim response action does not address the site-related contaminated soil. Soil removals, which started in 2004, are ongoing at the Site to remove source material. At the conclusion of the human health and ecological risk assessments, additional actions may be developed to accomplish source reduction.

Statutory Determinations

This interim action is protective of human health and the environment in the short term and is intended to provide adequate protection until a final ROD is signed; complies with those federal, tribal, and state requirements that are applicable or relevant and appropriate for this limited-scope action; and is cost-effective. This action is an interim action only and is not intended to utilize permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable for this Site. Because this action does not constitute the final remedy for the Site, the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element will be addressed by the final response action. Subsequent actions may be planned after a review of the risk assessment to address any threats posed by conditions at the Site. For that reason, this remedy may result in hazardous substances remaining on-site above health-based levels. Any final remedy will ensure that actions taken, if needed, will continue to provide adequate protection of human health and the environment through periodic reviews within five years after commencement of any final remedial action. Because this is an interim action ROD, review of this Site and remedy will be ongoing as EPA continues to develop remedial alternatives for the Site.

Interim ROD Data Certification Checklist

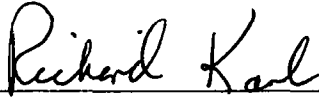
- *chemicals of concern:*
dioxin, arsenic, poly-cyclic aromatic hydrocarbons (PAHs) are the Contaminants of Concern (COCs) for this action.
- *Baseline risk:*
Please see "Revised House Dust Risk Calculations, St. Regis Paper Company Site, Cass Lake, Minnesota, 9/28/05 in the Administrative Record. (**Attachment A**)
- *Clean up levels and basis for COCs:*
Clean up levels are not established for this interim action. Removal of dust from the residences is required to achieve the goals of the action.
- *How source materials are addressed:*
Source materials will not be addressed in this interim action.
- *Current and reasonably anticipated future land use*
Reasonably anticipated future land uses for the Site as a whole have, as yet, not been established. Approximately 36 acres of the former operations area has been commercial/industrial since at least 1959. Residential properties have existed on portions of the Site for over fifty years.
- *Potential land and ground water use that will be available as a result of actions*
Continued occupancy of residents.
- *Estimated capital, Operations & Maintenance (O&M), and present worth and number of years over which remedy cost estimates are projected.*

The estimated cost for the remedy is \$660,000. The remedy is projected to be necessary until the implementation of the final remedy; a period of approximately one year.

- *Key factors in selecting the remedy*

The key factors in selecting this remedy are its effectiveness and timeliness in reducing the health risks to residents from contaminated house dust.

Authorizing Signature

A handwritten signature in cursive script that reads "Richard Karl". The signature is written in black ink and is positioned above a horizontal line.

Richard Karl, Director Superfund Division
EPA

Part 2: Decision Summary

Site Name, Location, and Description

St. Regis Paper Company Site, Leech Lake Indian Reservation, Cass Lake, Minnesota.

CERCLIS ID: MND057597940 Site ID: 0503781

Lead Agency: U.S. Environmental Protection Agency

Support Agencies: Leech Lake Band of Ojibwe
 Minnesota Pollution Control Agency

Site Type: Industrial facility, wood treatment

Site Description:

The St. Regis Paper Company Site is located in the City of Cass Lake, Cass County, within the exterior boundaries of the Leech Lake Indian Reservation in Cass County, approximately 20 miles east of Bemidji, Minnesota. The Site comprises four areas: a northwest area, a southwest area, a city dump area, and a residential area (**See Attachment B**). The northwest area is approximately 67 acres, located just to the south of the BNSF Railway Co. tracks. The southwest area, comprising about 20 acres, is the site of a Resource Conservation and Recovery Act (RCRA) subtitle C containment vault. The city dump area is the site of the former City of Cass Lake city dump comprising about 10 acres. Operable Unit 7, the area of remedial action, is an area of approximately 48 acres and is comprised of the residential properties in proximity to the former operations areas.

Site History and Enforcement Activities

The St. Regis Paper Company Site was operated from 1957 to August 1985 as a wood-treating facility. Chemicals used in the wood-treating processes changed as the facility evolved. Creosote was used in wood treatment from the beginning of operations. Pentachlorophenol (PCP) was added to the process around 1960. Dioxins/furans occur as impurities in commercial formulations of PCP, and therefore, are present in the wood-treating agents. Creosote and PCP were used at the Site until the facility closed. PCP was generally combined with a carrier solvent, usually No. 2 fuel oil. This combination, when present as a free phase product in the groundwater, tends to float. In latter years of facility operations, a water dispersible PCP concentrate, which was a proprietary mixture of PCP and ketone, was used. The PCP concentrate, denser than water, sinks if present as a free phase product in the groundwater. Ammoniacal copper arsenate (ACA) was added in 1969 and used until 1972. The active ingredients in ACA were copper (II) oxide and arsenic pentoxide.

The generation of wastewater began at the facility in 1957 when a 72-inch diameter by 75-foot long pressure cylinder was installed in the wood treating plant in the north central portion of the Site. Creosote was used as the wood treating chemical during the early years of facility operation. Wastewater discharged from the cylinder passed through a baffled separator tank and a charcoal filter before being discharged to a disposal pond located adjacent to the treating plant, Pond A.

In 1960, a 49-foot long extension was added to the original cylinder. The use of PCP as a treating chemical began about this time. Two underground tanks were added to further separate the water

from the oil in the discharge. Beginning in about 1960, wastewater was discharged to a series of three ponds, collectively called Pond B.

In 1969, a second cylinder was added to treat wood with ACA. The small amount of water that was routinely generated when the water soluble preservatives were used was returned as makeup water for preparing the treating solution; however, some cylinder wash water was discharged to the disposal ponds.

In mid-1971, the series of three disposal ponds were covered with sand and replaced with a new pond, Pond C. In 1972, the cylinder that had been used for treating wood with ACA was added as an expansion tank to the original cylinder and a new 72-inch diameter by 150-foot long cylinder was added for treating wood with PCP and ACA. In addition, a 20,000 gallon underground wastewater separation tank was added for each cylinder.

Improvements were made to the wastewater treatment system in 1974. With these improvements, wastewater from each cylinder was carried to a primary separating tank which was approximately 8 feet in diameter and 40 feet long. The oil that accumulated on top of the wastewater was skimmed and returned to the process. Water from the primary tank was pumped to a mixing station where a flocculating agent was added. The mixture was then pumped to a second tank for settling. Water was pumped from this tank through a sand filter and carried through the pipe to a sawdust filter located adjacent to Pond C.

Water from Pond C was used to spray-irrigate grass directly south of Pond C in 1977 and in the Southwest Area in 1980. Pond C was also dredged on one occasion, and the dredged bottom material was placed on the southeast and north sides of the pond. From about 1980 until the end of operations at the Site in 1985, process wastewater was disposed of in a drain, within the Chippewa National Forest, which led to the City of Cass Lake sewage treatment plant located just north of Fox Creek.

Use of Pond C was discontinued in mid-1980. The process was changed such that some wastewater was evaporated. Specifically, wastewater was directed into metal pans adjacent to the treatment plant, and excess steam from the boiler was run through the coils to heat and evaporate the wastewater. The solids were then placed in drums and hauled to waste disposal facilities outside of Minnesota. The evaporation process continued in this fashion until the facility's closure in 1985.

Around 1971, two underground tanks were placed in operation in the wastewater disposal system for oil/sludge/water separation. In 1976, there were incidents of sludge disposal in a pit in the Southwest Area. The quantity of sludge disposed in this area is not known. During active operations at the wood-treatment facility (1957-1985), metal bands, concrete, scrap wood, and miscellaneous other wastes from wood-treating operations were deposited in an on-site landfill area, located north and east of Pond C. Sawdust from the sawdust filters was also periodically deposited in the landfill area northwest of Pond C. Further, there were reports of disposal of

empty containers that once contained water-soluble, wood-preserving chemicals in this on-site landfill area (MPCA 1995).

Two teepee burners were operated at the site to dispose of wood scrap. One of the burners was situated south of Pond C; the other burner was located north and west of Pond C. Also, it was noted in the previous Five-Year Reviews (MPCA 1995; EPA 2000) that a 3,000-gallon spill of creosote in 1976 was recovered by absorption with sawdust. The sawdust was later reportedly burned in a brush-burning project. No additional information has been located regarding this incident.

A wood-constructed conduit ran approximately 75 yards south of the railroad tracks from Pond A to Ponds B and C. A test trench (TT-2) was dug in 1984 near an apparent manhole with no bottom. Observations made during the test trench excavation noted a creosote-type odor, oily water and black and purple stained sand extending to depths below the water table.

Between 1957 and 1975, sludge from the wood-treating operations was transported to the Dump and periodically burned. Between 1957 and 1960, disposal from Pond A occurred almost daily at an estimated rate of 500 gallons per day. After 1976, sludge from operations at the facility was transported to waste disposal facilities outside of Minnesota. The Dump pit was excavated in 1986. The Dump area is currently used by the City to compost yard wastes, dispose of woody vegetation, and store City equipment.

In September 1983, in response to groundwater sampling by the St. Regis Paper Company and sediment sampling by MPCA, EPA proposed the Site for inclusion on the NPL, with a hazard ranking of 53. Finalization of the listing occurred in September 1984 (EPA ID# MND057597940).

The MPCA, the lead agency, and then owner Champion International, negotiated two Response Orders by Consent (one for the former wood-treatment area (OU 1) and vault area (OU 2) and one for the Dump (OU 3)), issued in February 1985 (MPCA 1985a and 1985b). These documents outline the scope of the remedial investigations, feasibility studies, response action planning, response action implementation, routine operations, maintenance, and monitoring.

In 1986, Champion initiated the remedial action with MPCA providing oversight. City water was provided to nearby residents due to groundwater contamination from drip racks, sludge/wastewater pits, and historic spills. Extraction wells and a granulated activated carbon treatment system were installed to treat contamination plumes at the former operating area and City Dump. Wells were also installed for periodic groundwater monitoring. Visually contaminated soil was excavated and placed in an on-site RCRA Sub-title C containment vault. In 1994-95, oversight of Site operations and maintenance was transferred to EPA, with the assistance of the tribal and state governments, under a Unilateral Administrative Order (UAO) to Champion.

Five-year reviews conducted in 1995 by MPCA and in 2000 by EPA recommended additional soil sampling to confirm that soil contaminant levels were at acceptable levels. Initial sampling was conducted by EPA in 2001. That sampling indicated that levels of dioxin exceeded an acceptable residential value of 1 part per billion (ppb), the recommended preliminary remediation level for soils in EPA's Dioxin Policy. Residential removal values were used due to the Site's proximity to the residential area and the lack of any control to access. Additional confirmatory soil sampling was conducted in 2003 by International Paper (IP), successor to Champion, under a UAO from EPA. Due to the confirmation of soil values of dioxin over residential removal levels, soil removal actions were initiated by IP in 2004, under a December 2003 UAO from EPA. In addition, during 2005, the BNSF Railway Co. was added as a potentially responsible party for the Site. In August 2005, EPA issued a separate CERCLA Administrative Settlement Agreement for a removal action at the BNSF Railway Co. property.

During the fall of 2004, under an August 2004 UAO from EPA, IP began collecting samples in support of a human health and ecological risk assessment. Indoor residential dust sampling was conducted as a part of that risk assessment. The results of that indoor dust sampling were used as the basis for this action. (All sampling results are a part of the Administrative Record for the Site. See Attachment F for Administrative Record Index).

Community Participation

The House Dust Risk Calculations report and Proposed Plan for the St. Regis Paper Company Site in Cass Lake, Minnesota were made available to the public in June 2005. They can be found in the Administrative Record file in Region 5, on the St. Regis Site website at www.epa.gov/region5/sites/stregis/index.htm, and in the information repositories maintained by EPA at the Leech Lake Band of Ojibwe Division of Resource Management, Cass Lake Library, Leech Lake Tribal College Library, Bemidji State University Library, and the Cass Lake City Clerk's Office. The notice of the availability of these two documents was published in the Bemidji Pioneer and Cass Lake Times. A public comment period was open from June 2, 2005 until July 8, 2005. In addition, a public meeting was held on June 7, 2005 to present the Proposed Plan, solicit questions, and provide the public an opportunity to provide comments. Representatives from the Leech Lake Band of Ojibwe and the Minnesota Pollution Control Agency were also present while EPA answered questions on the remedial alternatives. EPA used previous meetings on March 22, 2005 and May 17, 2005 to solicit a wider cross section of community input on the reasonably anticipated future land use. Door-to-door meetings with residents in the affected area and public availability sessions were conducted on May 18, 2005. Certified letters were then mailed to residents in the affected areas to solicit comments on EPA's Proposed Plan. EPA's response to the comments received during this period is included in the Responsiveness Summary, which is part of the Interim Record of Decision.

Scope and Role of Operable Unit

An overall planned sequence of actions at the Site has not been established beyond the soil removal actions that continue to take place concurrent with this planned interim remedial action at Operable Unit 7. Subsequent actions will be developed once the human health and ecological risk assessments are complete. However, this interim action will neither be inconsistent with,

nor preclude, any additional actions that may be necessary. The sequence of events, as they are currently being applied at the Site include:

Past and Current response activities:

- Surface contaminated soil removal to 1 ppb for dioxin in unzoned areas
- Surface contaminated soil removal to 5 ppb in commercial areas
- Disposal of contaminated soil in an off-site landfill
- Seeding areas of soil removal
- Fencing and seeding of commercial areas with surface contamination above 1 ppb.

Activities Proposed in this Interim ROD:

- Removal of dust from the residences in proximity to the Site (Operable Unit 7)
- Soil cover on yards and seeding
- Initial and period house cleaning
- Apply dust suppressant to dirt roads

Site Characteristics

This action will include all of the residential properties south of the BNSF Railway Co. tracks, east of Highway 317, north of the Chippewa National Forest, and west of Pike Bay and its channel to Cass Lake (See Attachment B). It is an area of approximately 48 acres lying within the exterior boundaries of the Leech Lake Band of Ojibwe Indian Reservation. The surrounding land contains residential and commercial properties, forests, wetlands, and large water bodies. Lakes and channels adjacent to the Site are used by local and regional tribal members, other residents, and tourists for food, recreation, cultural, and spiritual activities.

The local topography is a hummocky terrain. The glacial deposits in the Site area range from heavy, poorly drained clayey soils developed on ground moraines to light, well drained sands on outwash plains. The residential area is relatively flat and has little relief. Although the surficial soils are sandy, surface water ponds in several areas during the spring and after heavy rains.

Contaminants within the Site soil have been transported into surrounding homes by either wind or by adherence to boots and clothing. The Site area is currently largely unfenced; the International Paper Company having fenced portions of the Site that it controls. The soil is sandy and contains little vegetative cover in many areas. Most roads through the Site are unpaved. Surface soil contamination, in excess of the residential removal action value for dioxin of 1 ppb was found in areas of the Site directly adjacent to the homes to be addressed in this action. Until recently, two daycare providers were located within the residential area of the Site. The likelihood of contaminant migration is high.

Site-related structures and facilities were removed during the remedial actions taken in the late 1980s by the responsible party under the supervision of the Minnesota Pollution Control Agency. Two structures remain from Site operations. One has been converted into a residence. The other is now a small commercial business. The only other site-related structures were built as a part of

the remedial actions. The RCRA subtitle C containment vault is located in the southwest area and the groundwater treatment plant occupies a portion of the former operations area.

Site sampling that is relevant to this proposed action can be divided into soil sampling and house dust sampling. During 2001, 56 soil samples were collected in the Site area by EPA. Most samples were composites, and all were taken from a depth of 0-6 inches. Sampling was conducted in the former operations area (20), the southwest area (6), and the former city dump area (1), on-site former pond and spray aeration areas (6), and the adjacent residential area (20). In addition, two reference soil samples and one seep sample were collected. The composite samples from the former operations area and the southwest area were field screened for PAHs and PCP using immunoassay and for arsenic, chromium, and copper using x-ray fluorescence. Laboratory analysis for the former operations and southwest area sampling was based on field screening results. Samples chosen from the former operations area for laboratory analysis were distributed over the range of field results, from highest to lowest. The six samples from the southwest area with the highest field readings were selected for laboratory analysis.

Additional composite soil sampling was conducted by International Paper in 2003, under a UAO from EPA. Within the north storage area, 53 samples were collected from a depth of 0-4 inches, 24 samples were collected from a depth of 4-12 inches and three samples were collected from 12-24 inches. In the southwest area, four samples from 0-4 inches and one sample from 4-12 inches were collected. Sampling locations were based on the 2001 sampling event values to better define areas above the residential removal level for dioxin in soil. In addition, the seven remaining residential properties north of South 3rd Street were sampled along with representative residential areas north of the BNSF Railway Co., tracks and south of South 3rd Street. The residential areas north and south of the Site were sampled to examine whether a significant off-site airborne contamination threat existed.

During the fall of 2004, under a second UAO from EPA, International Paper again sampled the Site. This time, sampling was in fulfillment of the conceptual site model developed for human health and ecological risk assessments. A portion of this sampling dealt with the risk of contaminated dust in residences near the Site. Ten of the approximately 40 residences were selected to represent a range of values for dioxin in the yard soil from previous sampling (See Attachment C). House sampling was conducted by collecting composite samples using a vacuum according to ASTM Method D 5438. Samples were collected from high-traffic areas of the home including flooring directly inside the front door and the main living area. See Attachment F for a list of all Orders and sampling results documentation.

Current and Potential Future Site and Resource Uses

The area to be considered in this action is residential. At the conclusion of this action, this area will remain a residential area pending the completion of the final ROD. At this time, the community is defining future uses for the entire Site area. EPA provided some assistance to this effort through the services of a contracting firm, E2 Inc. The results of these efforts will be used in the formulation of the final ROD for the Site.

Site Risks

This interim action will only address the specific risks associated with dioxin and arsenic contamination in the house dust of homes in the residential area of the Site. The risks to residents from contaminated house dust are related to ingestion, inhalation, and direct dermal contact. Human impacts from exposure to dioxin include cancer and eye, skin, liver, kidney, and reproductive system damage. Impacts from arsenic include cancer and liver, kidney, skin and lung damage. Other human health risks, if any, and all ecological risks, if any, will be described in the final ROD for the Site.

This interim action is necessary to achieve significant risk reduction quickly while a final remedial solution is being developed. Quantitative risk information relating to contaminated house dust is contained in the risk calculations attached to this decision document. The more specific findings of the baseline risk assessment, and the ultimate clean-up objectives (e.g., acceptable exposure levels) for the Site will be included in the subsequent final action ROD for the Site.

The primary method by which risks and hazards associated with potential exposure to chemicals in house dust samples were characterized was by comparison to World Trade Center (WTC) screening values (EPA 2003a). WTC methodologies were used because they contain accepted peer reviewed analyses of the same contaminants as this action in indoor settled dust. Specifically, residence-specific concentrations of chemicals (dioxin and arsenic) in house dust and dust loading results were used to calculate residence-specific screening values for dioxin and arsenic using Equations 1 and 2, respectively.

$$\begin{array}{l} \text{Residence-Specific Screening} \\ \text{Value for Dioxin} \\ (\text{ng/m}^2) \end{array} = \text{Loading (g/m}^2) \times \text{Concentration (ng/kg)} \times 10^{-3} \text{ kg/g} \quad (1)$$

$$\begin{array}{l} \text{Residence-Specific Screening} \\ \text{Value for Arsenic} \\ (\text{mg/m}^2) \end{array} = \text{Loading (g/m}^2) \times \text{Concentration (mg/kg)} \times 10^{-3} \text{ kg/g} \quad (2)$$

Where:

g/m^2	=	Grams per square meter
kg/g	=	Kilogram per gram
mg/kg	=	Milligram per kilogram
ng/kg	=	Nanogram per kilogram

Note: All residence-specific loading and concentration results were obtained from Barr Engineering Company (Barr 2005), the contractor for sample collection.

The residence-specific screening values for dioxin and arsenic were then compared to WTC screening levels for dioxin (2 ng/m²) and arsenic (0.4 mg/m²) (EPA 2003a). Residence-specific screening values and the results of the comparison are presented in **Attachment A**.

It should be noted that the WTC screening value is based on an exposure duration of 30 years. It is well established that a number of residents among the 10 homes sampled for house dust (as well as among the population of homes potentially affected by Site activities) have lived near the Site for well over 30 years. Therefore, it is appropriate to consider the impact of adjusting the WTC screening values to reflect an exposure duration of 70 years (e.g. lifetime exposure). Such an adjustment is consistent with adjustments made to human health screening levels incorporated into the risk assessment work plan that will be followed to complete the baseline risk assessment for the Site (IP 2004).

The modified WTC screening value for dioxin (5.7 ng/m²) was calculated using Equation 3.

$$\begin{array}{lcl} \text{Modified WTC} & = & (\text{WTC Screening Value} \quad (1\text{E}+06 \text{ [mg/kg-} \\ \text{Screening Value} & & \text{for Dioxin [2 ng/m}^2\text{])} \quad \text{day]}^{-1}) / 1.5\text{E}+05 \quad (3) \\ \text{for Dioxin (ng/m}^2\text{)} & & \text{[mg/kg-day]}^{-1}) \end{array}$$

A modified WTC screening value was not calculated for arsenic because the basis for the WTC value for arsenic is its noncarcinogenic effects. A change in exposure duration will not change a screening value based on noncarcinogenic effects.

As shown in Attachment A, Table 1, residence-specific screening values for dioxin exceed the WTC screening value (2 ng/m²) at five of the 10 sampled residences (Res9, Res14, Res15, Res16, and Res20). Similarly, the residence-specific screening values for arsenic exceeded the WTC screening value (0.4 mg/m²) at four residences (Res5, Res9, Res16, and Res20).

EPA also compared residence-specific screening values for dioxin to the WTC screening value modified to reflect (1) use of a cancer slope factor of 1.5E+05 (mg/kg-day)⁻¹ and (2) an exposure duration of 70 years. As shown in Table 1, residence-specific screening values for dioxin exceed the modified WTC screening value (5.7 ng/m²) at the same five residences (Res9, Res14, Res15, Res16, and Res20) identified above.

Remedial Action Objectives

The objective of this action is to reduce the volume of contaminated dust in residential properties and one business property adjacent to the Site in OU 7. Human health risk calculations developed by EPA (Attachment A) are the basis for determining the need to reduce contaminated dust volume in the homes.

Description of Alternatives: *Remedy Components*

Five options were developed in response to contaminated dust found in homes adjacent to the Site. The five options were: (1) no further action, (2) removing and replacing carpeting in all

nearby homes, (3) for homes exceeding EPA's acceptable risk levels: a) removing and replacing carpeting, b) initial and periodic housecleaning for contaminated dust removal, c) soil and grass cover to yards, and c) monitoring for homes below EPA's acceptable risk value, (4) for the entire group of nearby homes: a) removing and replacing carpeting, b) providing initial and periodic housecleaning for dust removal, c) applying a dust suppressant to the dirt roads (this element was not a part of the Proposed Plan), and d) providing soil and grass cover to all yards, and (5) permanent relocation of residents. Option 4 is EPA's preferred interim cleanup option.

Institutional Controls and long-term operation and maintenance were not considered in this action because of its interim nature. Operations and maintenance and institutional controls will be considered when permanent remedies are considered in the Final ROD.

The major components of each option are listed below.

1. No further action:

- Treatment components
 - None
- Containment Components
 - None
- Institutional Controls Components
 - None
- O&M Activities
 - None
- Monitoring
 - None

2. Removing and replacing carpeting in all nearby homes:

- Treatment components
 - None
- Containment Components
 - Old carpet will be landfilled
 - Vacuum cleaner bags and other cleaning waste will be landfilled
- Institutional Controls Components
 - None
- O&M Activities
 - None
- Monitoring
 - None

3. For homes exceeding EPA's acceptable risk levels: a) removal and replacement of carpeting, b) initial cleaning to include dust filters, vacuuming curtains, drapes, and upholstery, c) periodic housecleaning for contaminated dust removal, and d) soil and grass cover to yards. In addition, periodic monitoring for homes below EPA's acceptable risk value.

- Treatment components

- None
- Containment Components
 - Old carpet will be landfilled
 - Vacuum cleaner bags and other cleaning waste will be landfilled
 - Yard contaminants contained by soil cover
- Institutional Controls Components
 - None
- O&M Activities
 - Periodic Housecleaning for Dust Control
- Monitoring
 - Periodic monitoring of homes below risk levels for dioxin contamination

4. Includes: a) Removal and replacement of carpeting for the entire group of nearby homes, b) initial cleaning to include dust filters, vacuuming curtains, drapes, and upholstery, c) periodic housecleaning for dust removal, d) providing soil and grass cover to all yards, and e) applying dust suppressant to dirt roads. (This is EPA's preferred interim cleanup option.)

- Treatment components
 - None
- Containment Components
 - Old carpet will be landfilled
 - Vacuum cleaner bags and other cleaning waste will be landfilled
 - road dust contained with dust suppressant
 - Yard contaminants contained by soil cover
- Institutional Controls Components
 - None
- O&M Activities
 - Periodic Housecleaning for Dust Control
- Monitoring
 - Periodic monitoring of a subset of homes for dust accumulation

5. Permanent relocation of residents

- Treatment components
 - None
- Containment Components
 - None
- Institutional Controls Components
 - Restriction on future occupancy
- O&M Activities
 - None
- Monitoring
 - None

Description of Alternatives: *Common Elements and Distinguishing Features of Each Alternative*

The five options developed to address house dust contamination at the Site provide a broad range of alternatives. Excluding Option 1 (no action), and Option 5 (permanent relocation), the other three options have many similarities. Options 2, 3, and 4 all involve removing and replacing carpet in order to remove the largest potential source of residential dust. Option 2 only deals with the replacement of carpet and does not deal with other possible dust sources within the homes or the potential for recontamination of homes from the large still contaminated former operations area located adjacent to the homes. Options 3 and 4 also include: 1) an initial house cleaning including the removal and replacement of heating/air conditioning filters and cleaning duct work, upholstery, rugs, and drapes, and 2) periodic house cleaning for dust until a final remedy is implemented. Option 3 only remediates those residences that have been sampled at a value above an EPA screening level. This additional step would significantly lengthen the amount of time it takes to remediate homes by requiring additional sampling at the 30 unsampled homes, analyzing those samples, and then evaluating the results. EPA's preferred option, Option 4, is more protective than Option 2, will be quicker to implement than Option 3, and has the inclusion of a road dust suppressant to reduce the potential for contaminated dust in nearby homes (See documentation of significant changes).

As interim actions, none of the options deals with the ongoing sources of contaminated dust from the surface soil of the former operations area of the Site. However, Options 3 and 4 provide cover for yard-related contaminants in the surface soil in the short term. Any final action regarding contaminated soil, will be left to the final ROD to be developed after the completion of the human health and ecological risk assessments. For that reason, and due to the sparse vegetative cover in areas of the contaminated former operations area, EPA felt it was necessary to provide the periodic house cleaning for dust, outlined in Option 4, to address the remaining potential ongoing source for contaminated house dust.

No Applicable and/or Relevant and Appropriate requirements (ARARs) have been identified that would apply to the proposed removal and disposal of carpets, or for the initial and periodic cleaning of homes for dust removal. Likewise, no ARARs have been identified that would apply to either permanent relocation or to the no action alternative. For Option 3, where monitoring of house dust for dioxin contamination would be required, no ARARs have been identified for dioxin or arsenic in house dust. Consequently, EPA has used the mass per unit area of dioxin and arsenic approach developed for the WTC response.

EPA compared the options before recommending a preferred approach. Option 2 was not preferred because it does not include ongoing actions to suppress or eliminate additional deposits of contaminated dust once the carpet is replaced. Option 2 also does not address the potential for contaminated yard dust to enter affected homes. In addition, Option 2 does not include periodic house cleaning for the continued reduction of dust in the homes.

Option 3 was not preferred because it postpones taking the interim action until after additional sampling is completed. Such sampling of the 30 currently unsampled homes might take an additional 3 months for data collection, evaluation, validation, and interpretation of the results. In addition, the tested homes that were not above screening levels would require monitoring dust levels due to the uncertainties in a single “snapshot” house dust sampling event to determine contaminant dust volume. Those uncertainties include weather, seasonal variations, residents cleaning habits, and the continuing potential source of contaminated dust from elevated surface soil values at the adjacent former operations area.

None of the options meets a long-term reliability test. Periodic housecleaning cannot be considered a permanent option. Likewise, taking no action, simply replacing carpet, or relocating the residents does not deal with the potential sources for the dioxin contamination and applying a road dust suppressant to roads is a temporary solution. More permanent options will be considered in the final ROD.

The estimated time for design and implementation for all options except Options 3 and 5, is relatively short. Likewise the time to reach remediation goals is short. Once the interim remedy is implemented, the remediation goals will have been met. The remediation goals will be maintained by the continual housecleaning for dust reduction in Options 3 and 4. The longest time frame for getting a remedy in place is one year in the case of permanent relocation.

The costs for these remedies range from \$0 in the case of the no further action alternative to approximately \$2,400,000 in the case of permanent relocation of the residents. Options 3 and 4 have similar prices of \$620,450 for Option 3 and \$660,000 for Option 4. Option 3 has the cost of periodic monitoring of all homes which test below the WTC screening level. Option 2 at \$304,085 is the least expensive of the action options because it deals solely with the replacement of carpet (**See Attachment D**).

The expected outcome of the preferred Option 4 includes lowering long-term human health risks by removing contaminated dust from the interiors of residents homes and reducing the potential recontamination from yards, roads and the former operations areas. Option 3 also reduces these risks, but on a longer timeframe and with uncertainty in those homes testing below screening values. Additional expected outcomes will be addressed in the final ROD. No presumptive or innovative technologies are proposed.

Comparative Analysis of Alternatives: Overall Protection of Human Health and the Environment

Overall protection of human health and the environment addresses whether each alternative provides adequate protection of human health and the environment and describes how risks posed through each exposure pathway are eliminated, reduced, or controlled through treatment, engineering controls, and/or institutional controls.

Overall protection of the environment was not addressed in this interim action. However, all of the alternatives, except the no-action alternative, provide some protection of human health in the

short term by eliminating, reducing, or controlling risks posed by the Site through the reduction of contaminated dust in homes or removing residents from contaminated dust near the Site. Options 2, 3, and 4 would remove the potentially greatest single source of contaminated dust in homes by removing and replacing carpet. However, Option 2 does not address other common sources of contaminated house dust including drapes, filters, and upholstery. In addition, Options 2 and 3 do not deal with the potential for dust from vehicle traffic. Option 3 also removes and replaces carpet, but only in those homes which exceed the WTC screening levels. Monitoring of the homes below this action level for dioxin is included in Option 3 because of the uncertainty inherent in a single “snapshot” sampling event. The potential for recontamination from wind-borne dust from the remaining former operations source area while a final solution is developed favors Options 3 and 4 that include periodic house cleaning for dust removal.

Comparative Analysis of Alternatives: *Compliance with Applicable or Relevant and Appropriate Requirements*

Section 121(d) of CERCLA and NCP §300.430(f)(1)(ii)(B) require that remedial actions at CERCLA sites at least attain legally applicable or relevant and appropriate requirements, standards, criteria, and limitations which are collectively referred to as ARARs, unless such ARARs are waived under CERCLA section 121(d)(4).

Applicable requirements are those clean-up standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal, or tribal, or state environmental or facility citing laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. Relevant and appropriate requirements are those cleanup standards of control, and other substantive requirements, criteria, or limitations promulgated under federal, tribal, or state environmental or facility citing laws that, while not “applicable” to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address the problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site.

No federal, State of Minnesota, or Leech Lake Band of Ojibwe program has identified any requirement that would be applicable and/or relevant and appropriate to the options considered in this interim action. During the final ROD, EPA will conduct another evaluation for any additional proposed actions.

Comparative Analysis of Alternatives: *Long-Term Effectiveness and Permanence*

Long-term effectiveness and permanence refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once clean-up levels have been met. This criterion includes the consideration of residual risk that will remain on-site following remediation and the adequacy and reliability of controls.

This interim action does not address long-term effectiveness and permanence. This will be addressed in any final ROD actions.

Comparative Analysis of Alternatives: *Reduction of Toxicity, Mobility, or Volume Through Treatment*

Reduction of Toxicity, Mobility, or Volume Through Treatment refers to the anticipated performance of the treatment technologies that may be included as part of a remedy.

Options 1 and 5 do not include reduction of volume of contaminated dust in the homes of residents. Options 2, 3, and 4 do include reduction of volume through the disposal of contaminated dust by disposing of contaminated materials in landfills, but not by treatment. Options 3 and 4 potentially reduce more volume of contaminated dust in this way by also removing dust from additional home surfaces and filters. A reduction in the mobility of dioxin in the yard soil is accomplished in Options 3 and 4 by covering the dioxin contamination in yard soil with clean fill, but not due to any treatment technologies. Likewise, a reduction in the mobility of potential dioxin contaminated road dust will be accomplished in Option 4.

Comparative Analysis of Alternatives: *Short-term effectiveness*

Short-term effectiveness addresses the period of time needed to implement the remedy and any adverse impacts that may be posed to workers, the community, and the environment during construction and operation of the remedy until cleanup levels are achieved.

Option 1, no action, would not be an effective alternative because current risks from direct contact with contaminated dust would continue to exist: current homeowners would continue to be exposed to unacceptable levels of dioxin. Option 2 would be effective in the short term with the use of appropriate personnel to remove the contaminated carpet. Homeowners would be relocated during the carpet removal and replacement to eliminate their potential exposure during the action. Options 3 and 4 would likewise be effective in carpet replacement for the same reason as Option 2. Options 3 and 4 would also be effective with adequate training of periodic housecleaners. Proper training will also reduce potential exposures to workers and residents during the housecleaning for dust reduction operations. Option 5 would be an effective alternative by removing residents from the source of contaminated dust.

Comparative Analysis of Alternatives: *Implementability*

Implementability addresses the technical and administrative feasibility of a remedy from design through construction and operation. Factors such as availability of services and materials, administrative feasibility, and coordination with other governmental entities are also considered.

The removal of carpet proposed in Options 2, 3, and 4, while requiring a hazardous materials crew in order to be conservatively protective, is a straightforward operation. Carpet installation can be conducted by a carpet installer. Likewise periodic housecleaning in Options 3 and 4 is a straightforward task with proper equipment and training. The placement of clean dirt fill and seeding to yards is also easy to design, implement, and administer. Dust suppression is likewise, easily implemented. The relocation of residents in Option 5 would require much more administrative time and oversight as well as inconvenience to the residents than would be required to implement Options 3 and 4.

Comparative Analysis of Alternatives: *Cost*

The estimated present worth costs for the alternatives, excluding the No Action alternative, range from \$304,085 for Option 2 to \$2,400,000 for Option 5. The cost of each alternative rises with the number of homes affected and the amount of monitoring sampling required. Option 4, the preferred alternative at \$660,000 has a cost that is nearly equal to Option 3 at \$620,450 which takes significantly longer to complete. Option 2, at a cost of \$304,085, does not address many of the potential sources of contaminated house dust. Option 5, while not considered an interim solution, could be considered as a part of a final remedy. Cost summaries can be found in **Attachment D**.

Comparative Analysis of Alternatives: *Tribal and State Acceptance*

Both the State of Minnesota and the Leech Lake Band of Ojibwe expressed acceptance of Option 4, with comments. These comments are addressed in the Responsiveness Summary.

Comparative Analysis of Alternatives: *Community Acceptance*

During the public comment period from May 30, 2005 through July 8, 2005, many community members expressed support for Option 5. In addition, a number of community members supported Option 4 with modifications. Many of the proposed modifications were related to providing cover to the dirt roads. The community did not comment on Options 1, 2, or 3.

Principal Threat Waste

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site whenever practicable [NCP §300.430(a)(1)(iii)(A)]. Principle threats refer to high concentrations of a toxicant, not the primary contaminant of concern. By these standards there are no principal threat wastes at the Site, therefore, treatment is not appropriate.

Source material, in the form of dioxin-contaminated soil, is present in the operations area of the St. Regis Site and in nearby yards of the residents. None of the alternatives address the source materials of the Site by treatment other than removal of contaminated dust present inside the affected residences.

Selected Interim Remedy: *Summary of the Rationale for the Selected Interim Remedy*

Option 4, removal and replacement of carpeting for the entire group of nearby homes, providing initial and periodic housecleaning for dust removal, providing soil and grass cover to all yards, and applying a dust suppressant to the dirt roads was selected as EPA's preferred remedial action. The principal factors on which the remedy selection decision was based include rapid and implementable protectiveness of human health, short-term effectiveness, cost, and tribal, state, and partial community acceptance. In contrast: 1) Option 2 does not address potential recontamination, 2) Option 3, at the same cost, requires more time to achieve and would involve monitoring sampling, and 3) Option 5 would require much more time and would be disruptive and expensive as an interim solution.

Periodic housecleaning for dust is considered a necessary part of the remedy because, although many sources of contaminated dust will be addressed, the large nearby source at the former

operations area will not be addressed until the Final ROD. The operations area is a large open field with sparse vegetation. The potential exists for windblown soil from the Site to recontaminate homes. An interim response is needed while waiting for a plan to address contaminated Site soils.

Soil cover to all yards is, likewise, an interim response and not meant to be a final solution to yard contamination. The soil cover, of sufficient depth to support grass, is intended to prevent tracking contaminated soil into homes while a final ROD is developed.

The available options for dust suppression will need to be investigated in order to determine the method that provides the best benefit while ensuring no environmental harm.

There are no ARARs that would apply to Option 4. In addition, although Option 4 does not reduce volume through treatment, it does reduce volume by sending the contaminated dust to a landfill. Option 4 also does not exhibit long-term effectiveness but it does exhibit short-term effectiveness. On the whole, Option 4 provides the best consideration of tradeoffs with respect to the balancing and modifying criteria.

Selected Interim Remedy: *Description of Selected Interim Remedy*

Option 4 requires the following actions: 1) the removal and replacement of carpeting for the entire group of nearby homes, 2) providing initial and periodic housecleaning for dust removal, 3) providing soil and grass cover to all yards, and 4) providing dust suppression to the local dirt streets. This choice is similar to Option 3 but involves providing the remedy to all of the 40 homes near the St. Regis Site rather than just to those homes that are tested and do not exceed a screening level.

In preparation for the removal and replacement of carpet, residents would be temporarily relocated to local hotels and receive the hotel costs plus food expenses. Any resident who would prefer to stay with family or friends would still receive the food allowance. The contents of each residence would be videotaped prior to any work for liability purposes. Carpet removers would be HAZMAT certified as a precaution and, during the removal and initial house cleaning for dust, would operate in an environment to further reduce dust. Carpet to be removed would be misted with water to eliminate resuspension of dust during the removal. Initial housecleaning for dust removal would involve removal and replacement of heating/air conditioning filters, cleaning all duct work, and a thorough cleaning of all potential areas of dust collection such as upholstery, rugs, and draperies utilizing high efficiency particulate air (HEPA) filters. Carpet installers would not require special training. Finally, doormats would be placed outside the homes to further trap dust before entering homes.

Clean topsoil would be provided to cover the yards and grass seed applied to reduce tracking contaminated soil into the home. This clean soil would be tested for contaminants before use. Approximately 4" of clean soil would be placed in the main front and back yard areas followed by seeding with an athletic field mix of grass. Any debris on the yards would be removed.

Maintenance housecleaning for dust removal, including vacuuming of carpet, rugs, drapes, upholstery, and periodic changing of heating/air conditioning filters would occur bimonthly from May through October and then quarterly from November through April and will continue until the final remedial decision is implemented. This periodic house cleaning would utilize high efficiency particulate air (HEPA) filters. Because of the continual housecleaning for dust removal, monitoring would not be needed.

Dust suppression in local dirt streets would be accomplished using a soybean oil by-product or other environmentally safe method.

This cleanup would take about three months to complete. Cost: \$665,000

Selected Interim Remedy: *Summary of Estimated Remedy Costs*

See **Attachment D**.

Selected Interim Remedy: *Expected Outcomes of Selected Interim Remedy*

As an interim measure, this remedy will result in a significant reduction in the amount of contaminated dust exposure to the residents living near the St. Regis Site from the most likely sources of indoor dust: house carpet, house furnishings, filters, yard soil, and adjacent dirt roads.

Statutory Determinations

This interim action is protective of human health from the contaminated house dust exposure pathway it is addressing in the short term until a final ROD is implemented. There are no ARARs specific to this interim action. An interim action waiver is, therefore, not needed. In EPA's judgment, the Selected Interim Remedy is cost-effective and represents a reasonable value for the money to be spent. With respect to the utilization of permanent solutions and treatment to the maximum extent practicable, the interim action is not designed or expected to be final, but the Selected Interim Remedy represents the best balance of trade-offs among alternatives with respect to pertinent criteria, given the limited scope of the action. In addition, the preference for treatment will be addressed in the final decision document for the Site.

Documentation of Significant Changes

Based on input received during the comment period, the selected remedial option has been modified from the Proposed Plan to incorporate a dust suppressant to dirt roads of the OU 7 and OU 1 areas to reduce the amount of dust generated by vehicles traveling into the area. This modification is necessary to further reduce, on an interim basis, the potential for contaminated dust in the residences. This modification was only applied to Option 4, EPA's preferred alternative. The change has no relevance to either Option 1 or 5 because it would not be added to either the no action alternative or the permanent relocation option. It was also not added to Options 2 and 3 for simplicity of the change and because its sole addition to those options would

not have influenced the selection of preferred Option 4. EPA does not consider this change to be significant.

In addition, costs of the selected remedial option have significantly increased. Original estimates for carpet removal were based on costs which reflect the use of workers trained only in carpet removal. Costs were increased to reflect the use of trained HAZMAT crews to provide a very conservative work environment. Other, minor cost adjustments have been made to reflect more precise engineering estimates developed since the Proposed Plan.

Although the cost changes are significant, EPA considers the changes to be reasonably anticipated by the public. No other significant changes were made to the options presented with the Proposed Plan. The changes made to EPA's preferred option do not significantly alter its overall purpose and could be reasonably anticipated by the public based on the June 2005 Proposed Plan.

Part 3: Responsiveness Summary

Stakeholder Issues and Lead Agency Responses

See Attachment E.

Attachment A

REVISED HOUSE DUST RISK CALCULATIONS ST. REGIS PAPER COMPANY SITE CASS LAKE, MINNESOTA

1.0 INTRODUCTION

In October 2004, samples of house dust were collected from 10 homes at the St. Regis Paper Company site in Cass Lake, Minnesota. The homes that were sampled were selected to represent homes with a range of 2,3,7,8-tetrachloro-p-dioxin toxicity equivalents (dioxin-TEQ); specifically, 3, 4, and 3 homes were identified as having low, medium, and high dioxin-TEQ concentrations, respectively, in surface soil from their yards. The samples were collected by contractors for International Paper Company (IP) and the U.S. Environmental Protection Agency (EPA) work assignment manager provided oversight during sample collection. The house dust samples were analyzed for dioxin-TEQ, benzo(a)pyrene-TEQ, and arsenic concentrations. Barr Engineering Company (Barr) published analytical results for the house dust samples in February 2005 (Barr 2005). Based on these analytical results, risks and hazards were characterized for each home sampled using two methodologies:

1. Receptor-specific chemical concentrations in house dust and dust loading results were used to calculate residence-specific loading rates which were compared to “settled dust screening values” (screening values) developed by the World Trade Center (WTC) Indoor Air Task Force Working Group (EPA 2003a). The WTC screening values consider dermal contact with and ingestion of dust and are based on an assumed 30-year exposure duration.
2. Receptor-specific chemical concentrations in house dust were compared to EPA Region 9 residential soil preliminary remediation goals (PRG). The PRGs consider potential exposure through incidental ingestion, dermal contact, and inhalation of particulates and are based on an assumed 30 year residential exposure duration (EPA 2004a).

Each of these methods (and variations of each) is summarized below in Section 2.0. Chemical-specific toxicity factors used in the calculations are discussed in Section 3.0. Method-specific risks and hazards are presented and compared in Section 4.0. Finally, uncertainties associated with the methods used and the method-specific risks and hazards are discussed in Section 5.0. References cited in the text are listed immediately following Section 5.0.

2.0 RISK AND HAZARD CALCULATION METHODS

As discussed in Section 1.0, chemical-specific and total risks and hazards were calculated for each of the 10 homes at which house dust samples were collected in October 2004, using two basic methods. These methods are summarized in Sections 2.1 and 2.2.

2.1 Comparison to WTC Screening Values

The primary method by which risks and hazards associated with potential exposure to chemicals in house dust samples were characterized was by comparison to WTC screening values (EPA 2003a).

Specifically, residence-specific concentrations of chemicals (dioxin and arsenic) in house dust and dust loading results were used to calculate residence-specific loading rates for dioxin and arsenic using Equations 1 and 2, respectively.

$$\begin{array}{l} \text{Residence-Specific Screening} \\ \text{Value for Dioxin} \\ (\text{ng/m}^2) \end{array} = \text{Loading (g/m}^2) \times \text{Concentration (ng/kg)} \times 10^{-3} \text{ kg/g} \quad (1)$$

$$\begin{array}{l} \text{Residence-Specific Screening} \\ \text{Value for Arsenic} \\ (\text{mg/m}^2) \end{array} = \text{Loading (g/m}^2) \times \text{Concentration (mg/kg)} \times 10^{-3} \text{ kg/g} \quad (2)$$

Where:

g/m^2	=	Grams per square meter
kg/g	=	Kilogram per gram
mg/kg	=	Milligram per kilogram
ng/kg	=	Nanogram per kilogram

Note: All residence-specific loading and concentration results were obtained from Barr Engineering Company (Barr) (Barr 2005).

The residence-specific loading rates for dioxin and arsenic were then compared to WTC screening levels for dioxin (2 ng/m²) and arsenic (0.4 mg/m²) (EPA 2003a). Residence-specific loading rates and the results of the comparison are presented in Table A-1.

It should be noted that the WTC screening value is based on an exposure duration of 30 years. It is well established that a number of residents among the 10 homes sampled for house dust (as well as among the population of homes potentially impacted by site activities) have lived near the site for well over 30 years. Based on discussions with representatives of the Leech Lake Band of Ojibwe (the Band), lifetime residence within the community is consistent with the Band's traditional lifestyle (Tetra Tech 2004). Therefore, it is appropriate to consider the impact of adjusting the WTC screening values to reflect an exposure duration of 70 years (e.g. lifetime exposure). Such an adjustment is consistent with adjustments made to human health screening levels incorporated into the risk assessment work plan that will be followed to complete the baseline risk assessment for the site (IP 2004).

The screening value for dioxin used for the WTC response is based on the dioxin cancer slope factor of 1E+06 (milligrams per kilogram-day [mg/kg-day])⁻¹ proposed in EPA's "Draft Dioxin Reassessment" (EPA 2003b). This cancer slope factor is currently undergoing review by the Science Advisory Board of the National Academy of Sciences. If the WTC screening value for dioxin is adjusted to reflect the dioxin slope factor of 1.5E+05 (mg/kg-day)⁻¹ used to develop the EPA Region 9 PRGs (EPA 2004a), the screening value would be increased.

The modified WTC screening value for dioxin (5.7 ng/m²) was calculated using Equation 3.

$$\text{Modified WTC Screening Value for Dioxin (ng/m}^2\text{)} = \frac{(\text{WTC Screening Value for Dioxin [2 ng/m}^2\text{)]) (1\text{E}+06 \text{ [mg/kg-day]}^{-1})}{1.5\text{E}+05 \text{ [mg/kg-day]}^{-1}} (30 \text{ years}/70 \text{ years}) (3)$$

A modified WTC screening value was not calculated for arsenic because the WTC screening value for arsenic is based on noncarcinogenic effects; a change to the exposure duration value will not change the WTC screening value for arsenic.

2.2 Comparison to EPA Region 9 PRGs and Modified PRGs

For the purpose of comparison to the WTC results (see Section 2.1), residence-specific chemical concentrations in house dust were also compared to EPA Region 9 PRGs and modified PRGs. Section 2.2.1 discusses comparisons to EPA Region 9 PRGs (EPA 2004a). Section 2.2.2 discusses comparisons to EPA Region 9 PRGs modified to reflect a 70-year exposure duration. Finally, Section 2.2.3 discusses comparisons to PRGs based on child exposures and noncarcinogenic endpoints.

2.2.1 Comparison to EPA Region 9 PRGs

In the second method, the concentration of each chemical (dioxin-TEQ, benzo[a]pyrene, and arsenic) measured in house dust samples were compared to its chemical-specific EPA residential soil PRG (EPA 2004a). PRGs for the three chemicals listed above are all based on a target carcinogenic risk of 1E-06. Therefore, chemical-specific risks associated with potential exposure to house dust were calculated using Equation 4.

$$(\text{Chemical concentration/Chemical-specific preliminary remediation goal [PRG]}) * 1\text{E-}06 \quad (4)$$

It should be noted that the EPA Region 9 residential PRGs are based on an assumed exposure via incidental ingestion, dermal exposure, and inhalation of particulates over an exposure duration of 30 years. For the purposes of calculation, pathway-specific exposure rates were calculated based on integrated adult and child exposures. The 30-year exposure duration was assumed to be divided into 6 years as a child and 24 years as an adult (EPA 2004a).

Total risks were calculated as the sum of the dioxin-TEQ-, benzo(a)pyrene-TEQ-, and arsenic-specific risks. All chemical-specific, total, and alternate risks calculated using this method are presented in Table A-2. It should be noted that Table A-2 also presents risks calculated based on comparison to EPA Region 9 residential PRGs adjusted to reflect use of the proposed dioxin slope factor.

2.2.2 Comparison to Modified EPA Region 9 PRGs

Residents living in several of the homes at which house dust samples were collected are known to have lived in their home for over 50 years. Based on conversations with members of the Leech Lake Band of

Ojibwe (the Band), it is assumed that at least some members of the Band may live their entire lives at a single residence. Therefore, EPA Region 9 PRGs were modified to reflect an assumed residential exposure duration of 70 years. Specifically, it was assumed that receptors would be exposed for 6 years as a child and 64 years as an adult. The dioxin slope factor was also adjusted to reflect use of the proposed dioxin slope factor. Chemical-specific risks were calculated using the equation above and the modified PRGs.

Total risks were calculated as the sum of the dioxin-TEQ-, benzo(a)pyrene-TEQ-, and arsenic-specific risks. All chemical-specific, total, and alternate risks calculated using this method are presented in Table A-3.

2.2.3 Comparison to PRGs Based on Child Exposures and Noncarcinogenic Endpoints

In addition to potential carcinogenic effects, potential exposure to all three chemicals for which house dust samples were analyzed (dioxin-TEQ, benzo[a]pyrene, and arsenic), also cause noncarcinogenic health effects. Therefore, a third set of PRGs were developed based on potential exposure by children (0 to 6 years of age) and considering only noncarcinogenic endpoints. Children were selected as receptors because potential exposure by children (adjusted for body weight) is greater than potential exposure by adults (also adjusted for body weight). Noncarcinogenic-based, child PRGs were calculated using Equation 4.2 from EPA Region 9's "User's Guide and Background Technical Document for USEPA Region 9's Preliminary Remediation Goals (PRG) Table" (EPA 2004b). This equation is repeated below.

$$C \text{ (mg/kg)} = \frac{THQ \times BW_c \times AT_n}{EF_r \times ED_c \left[\left(\frac{1}{RfD_o} \times \frac{IRS_c}{10^6 \text{ mg/kg}} \right) + \left(\frac{1}{RfD_o} \times \frac{SA_c \times AF \times ABS}{10^6 \text{ mg/kg}} \right) + \left(\frac{1}{RfD_i} \times \frac{IRA_c}{PEF} \right) \right]} \quad (5)$$

where:

ABS	=	Dermal Absorption
AF _c	=	Adherence Factor - Child
AT _n	=	Averaging Time For Noncarcinogen
BW _c	=	Body Weight - Child
ED _c	=	Exposure Duration - Child
EF _r	=	Exposure Frequency - Resident
IRA _c	=	Inhalation Rate - Child
IRS	=	Integrated Risk Information System
IRS _c	=	Soil Ingestion Rate - Child
PRG	=	Preliminary Remediation Goal
RfD _i	=	Reference Dose - Inhaled

RfD_o = Reference Dose - Oral
 SA_c = Skin Surface Area - Child
 THQ = Target Hazard Quotient

Because the child-based PRGs are calculated using a THQ equal to 1, chemical-specific hazards were calculated as follows.

$$\text{Hazard (unitless)} = (\text{Chemical Concentration/PRG}) \quad (6)$$

Dioxin-TEQ-specific hazards were not calculated because no reference doses (RfD) are currently available; these toxicity factors are currently under consideration by EPA. Total hazards were, therefore, calculated as the sum of the benzo(a)pyrene-TEQ- and arsenic-specific hazards. Exposure parameter values and all chemical-specific, total, and alternate hazards are presented in Table A-4.

3.0 CHEMICAL-SPECIFIC TOXICITY FACTORS

For the first two methods discussed above in Sections 2.1 and 2.2, chemical-specific toxicity factors used in the calculations are those selected by EPA Region 9 (EPA 2004a), with one exception. The EPA Region 9 PRGs for dioxin are based on oral and inhalation slope factors equal to $1.5E+05$ (milligrams/kilogram-day)⁻¹ (EPA 1997a). As part of its “Draft Dioxin Reassessment” EPA proposed an alternate slope factor of $1E+06$ (milligram/kilogram-day)⁻¹ (EPA 2003b). Therefore, dioxin-TEQ and total risks were calculated based on both dioxin slope factors. Risks calculated using the proposed slope factor are presented for comparison purposes only. The “Draft Dioxin Reassessment” is under review and may be modified as a result of this review by the National Academy of Sciences.

The RfDs used in the calculations based on the child PRGs were identified from a variety of sources. The oral and inhalation RfDs were not identified as part of the EPA Region 9 PRGs (EPA 2004a). Therefore, these values were identified from alternate sources (EPA 2003c). No oral or inhalation RfDs are available for dioxin; EPA is currently considering these toxicity factors. Pyrene was selected as a surrogate for benzo(a)pyrene based on structural similarities; therefore, the pyrene’s oral RfD of $3E-02$ mg/kg-day (EPA 2004a) was selected as the oral RfD for benzo(a)pyrene. Consistent with the approach taken by EPA Region 9 in developing their PRGs, the oral RfD for benzo(a)pyrene was used as its inhalation RfD.

The oral RfD for arsenic of 3E-04 mg/kg-day was obtained from EPA (2005). The inhalation RfD for arsenic was selected following EPA's updated hierarchy of toxicity information sources (EPA 2003). Specifically, the California Environmental Protection Agency (Cal/EPA) chronic reference exposure level (REL) of 3E-02 microgram per cubic meter ($\mu\text{g}/\text{m}^3$) was converted as shown in Equation 7 (Cal/EPA 2003).

$$(3\text{E-}02 \mu\text{g}/\text{m}^3) \times (1 \text{ mg}/1000 \mu\text{g}) \times 20 \text{ m}^3/\text{day} \times 1/70 \text{ kg} = 8.6\text{E-}06 \text{ mg}/\text{kg-day} \quad (7)$$

4.0 CHEMICAL-SPECIFIC AND TOTAL RISKS AND HAZARDS

Chemical-specific and total risks and hazards calculated for all 10 homes at which house dust samples were collected using the methods described in Sections 2.1 and 2.2 are presented and discussed in Sections 4.1 and 4.2 and are compared in Section 4.3.

4.1 Risks and Hazards Based on Comparison to WTC Screening Values

As shown in Table A-1, residence-specific loading rates for dioxin exceed the WTC screening value ($2 \text{ ng}/\text{m}^2$) at five residences (Res9, Res14, Res15, Res16, and Res20). Similarly, the residence-specific loading rates for arsenic exceeded the WTC screening value ($0.4 \text{ mg}/\text{m}^2$) at four residences (Res5, Res9, Res16, and Res20).

EPA also compared residence-specific loading rates for dioxin to the WTC screening value modified to reflect (1) use of a cancer slope factor of $1.5\text{E}+05 (\text{mg}/\text{kg-day})^{-1}$ and (2) an exposure duration of 70 years. As shown in Table A-1, residence-specific loading rates for dioxin exceed the modified WTC screening value ($5.7 \text{ ng}/\text{m}^2$) at the same five residences (Res9, Res14, Res15, Res16, and Res20) identified above.

4.2 Risks and Hazards Calculated Based on Comparison to EPA Region 9 PRGs and Modified PRGs

As discussed in Section 2.2, for the purpose of comparison to the WTC results (see Section 4.1), residence-specific risks and hazards were calculated based on comparison to EPA Region 9 PRGs and modified PRGs.

4.2.1 Risks and Hazards Calculated Based on Comparison to EPA Region 9 PRGs

Chemical-specific and total risks calculated based on comparison to EPA Region 9 PRGs are presented in Table 2. Risks for dioxin were calculated using both the slope factor currently listed in EPA's Integrated Risk Information System (IRIS) and used as part of the EPA Region 9 PRGs and EPA's recommended alternate slope factor. Risks based on the current and alternate dioxin slope factors are discussed in Sections 4.2.1.1 and 4.2.1.2. It should be noted that risks calculated using the proposed dioxin slope factor are presented for comparison purposes only. The proposed slope factor is currently under review and may be modified as a result of this review by the National Academy of Sciences.

4.2.1.1 Risks Based on Current Dioxin Slope Factor

The total risk based on the current dioxin slope factor equals or exceeds $1\text{E-}04$ (the upper end of EPA's risk range) at only two homes: SR-RES5HD-03 ($2\text{E-}04$) and SR-RES9HD-05 ($1\text{E-}04$). Total risk at these homes is driven by arsenic. Specifically, arsenic contributes 97 percent of the total risk at SR-RES5HD-03 and 55 percent of the total risk at SR-RES9HD-05 (dioxin-TEQ contributes 41 percent of the total risk at this second location). Total risk at all other homes is between $2\text{E-}05$ and $8\text{E-}05$. Total risk at the remaining 8 homes is driven by dioxin-TEQ (contributions ranging from 14 to 59 percent) and arsenic (contributions ranging from 22 to 71 percent). Benzo(a)pyrene-TEQ contributes less than both dioxin-TEQ and arsenic to total risk at 6 of the 10 homes sampled and benzo(a)pyrene is never the primary risk driver at any of the homes sampled.

4.2.1.2 Risks Based on Proposed Dioxin Slope Factor

The total risk based on the proposed dioxin slope factor equals or exceeds $1\text{E-}04$ (the upper end of EPA's risk range) at 7 of the 10 homes sampled; the greatest risk was calculated for SR-RES9HD-05 ($5\text{E-}04$). Total risk at these homes is driven by dioxin-TEQ (contributions ranging from 74 to 93 percent). The only home with a total risk equal to or exceeding $1\text{E-}04$ that is not driven by dioxin-TEQ is SR-RES5HD-03; the total risk at this home is driven by arsenic (97 percent). Total risk for the remaining three homes range from $3\text{E-}05$ to $8\text{E-}05$; risks at these locations are also driven by dioxin-TEQ, but to a less extent (contributions ranging from 52 to 64 percent). The contribution of benzo(a)pyrene to total risk is less than described above for risks based on the current dioxin slope factor.

4.2.2 Risks and Hazards Calculated Based on Comparison to Modified EPA Region 9 PRGs

Chemical-specific and total risks calculated based on comparison to modified EPA Region 9 PRGs are presented in Table A-3. Risks for dioxin were calculated using both the slope factor currently listed in EPA's IRIS and used as part of the EPA Region 9 PRGs and EPA's recommended alternate slope factor. Risks based on the current and alternate dioxin slope factors are discussed in Sections 4.2.2.1 and 4.2.2.2.

4.2.2.1 Risks Based on Current Dioxin Slope Factor

The total risk based on the current dioxin slope factor equals or exceeds $1\text{E-}04$ (the upper end of EPA's risk range) at three homes (as compared to only two homes using unmodified PRGs): SR-RES5HD-03 ($2\text{E-}04$), SR-RES9HD-05 ($2\text{E-}04$), and SR-RES16HD-07 ($1\text{E-}04$). Total risk at these homes is driven by arsenic and dioxin-TEQ. Specifically, arsenic contributes 97 percent of the total risk at SR-RES5HD-03 and 56 percent of the total risk at SR-RES9HD-05 (dioxin-TEQ contributes 42 percent of the total risk at this location). In contrast, dioxin-TEQ contributes 61 percent of the total risk at SR-RES16HD-07 (arsenic contributes 37 percent of the total risk at this location). Total risk at all other homes is between $3\text{E-}05$ and $9\text{E-}05$. Total risk at the remaining 7 homes is driven by dioxin-TEQ (contributions ranging from 14 to 65 percent) and arsenic (contributions ranging from 22 to 72 percent). Benzo(a)pyrene-TEQ contributes less than both dioxin-TEQ and arsenic to total risk at 6 of the 10 homes sampled and benzo(a)pyrene is never the primary risk driver at any of the homes sampled.

4.2.2.2 Risks Based on Proposed Dioxin Slope Factor

The total risk based on the proposed dioxin slope factor equals or exceeds $1\text{E-}04$ (the upper end of EPA's risk range) at 8 of the 10 homes sampled; the greatest risk was calculated for SR-RES9HD-05 ($7\text{E-}04$). Only risks at SR-RES13HD-04 and SR-RES18HD-10 were determined to be less than $1\text{E-}04$. Total risk at the eight homes with total risks equal to or exceeding $1\text{E-}04$ is driven by dioxin-TEQ (contributions ranging from 63 to 92 percent) with one exception. The only home with a total risk equal to or exceeding $1\text{E-}04$ that is not driven by dioxin-TEQ is SR-RES5HD-03 ($2\text{E-}04$); the total risk at this home is driven by arsenic (97 percent). Total risk for the two homes with total risks less than $1\text{E-}04$ (SR-RES13HD-04 [$5\text{E-}05$] and SR-RES18HD-10 [$8\text{E-}05$]) are also driven by dioxin-TEQ, but to a less extent (contributions ranging from 51 to 57 percent). The contribution of benzo(a)pyrene to total risk is less than described above for risks based on the current dioxin slope factor.

4.2.3 Hazards Based on Comparison to Child PRGs

Chemical-specific and total hazards calculated based on comparison to child PRGs are presented in Table A-4. Total hazards equaled or exceeded a target hazard of 1 at two of the 10 residences sampled – Res5 (hazard = 2.7) and Res9 (hazard = 1.4). Total hazards at these properties are all driven by arsenic (contributions of 99.8 and greater).

4.3 Comparison of Method-Specific Risks and Hazards

Risks were calculated by comparing house dust concentrations to WTC screening values (and modified WTC screening values) and to EPA Region 9 PRGs (and modified EPA Region 9 PRGs), considering both the current dioxin-TEQ slope factor and the EPA-recommended alternate slope factor. Risks calculated under these various scenarios are compared below.

- The residences identified with residence-specific loading rates that exceed WTC and modified WTC screening values (Res5 [arsenic only], Res9 [dioxin and arsenic], Res14 [dioxin only], Res15 [dioxin only], Res16 [dioxin and arsenic], and Res20 [dioxin and arsenic]) (see Table 1) closely match the residences identified with total and chemical-specific risks greater than 1E-04 (see Tables A-2 and A-3). (Note: two other residences with total risks greater than 1E-04 (Res12 and Res17) have residence-specific loading rates less than, but similar to, the WTC screening value for arsenic.
- Chemical-specific and total risks calculated based on comparison to modified EPA Region 9 PRGs varied from 1 to 2 times greater than risks calculated based on comparison to unmodified PRGs.
- Chemical-specific and total risks calculated based on the EPA-recommended alternate slope factor were about 6.7 and 1 to 5 times greater, respectively, than the chemical-specific and total risks based on the current dioxin slope factor. The variation in total risks is dependent on the contribution of arsenic to total risks at each residence.
- Total risks calculated based on comparison to modified EPA Region 9 PRGs and assuming 70 years of residential exposure varied from 1 to 7 times greater than risks calculated based on comparison to unmodified PRGs and assuming 30 years of residential exposure. Excluding the single residence at which the risk did not significantly change (SR-RESSHD-03 – this location had the highest arsenic concentration [62.8 mg/kg]), the risks varied from 2.5 to 7 times higher.

5.0 UNCERTAINTIES

Comparison of residence-specific chemical concentrations in house dust and loading results (in the form of residence-specific screening values) to WTC screening values represents a current and technically appropriate methodology. The WTC screening values were specifically designed to evaluate potential

exposure to chemicals in settled dust within a residence. The WTC screening values are calculated using assumptions regarding receptor-specific exposure potential to chemicals in house dust. The exposure assumptions used to calculate the WTC screening value originated in EPA's "Standard Operating Procedures (SOPs) for Residential Exposure Assessment" (EPA 1997b and 2001). However, the assumptions were modified for use in calculating screening values to reflect residential exposure potential (EPA 2003). To the extent that the assumptions used to calculate the WTC screening values do not reflect actual site-specific receptor activity patterns, uncertainty is introduced.

Significant uncertainties are associated with characterizing risks based on comparison to residential soil PRGs. Two primary sources of uncertainty differences are (1) the amount of soil and dust to which receptors may be exposed and (2) differences in the amount and configuration of soil and dust adhering to receptors' skin and the differences in chemical-specific absorption related to these differences.

Residential soil PRGs are based on the assumption that there is an unlimited amount of soil (and dust) to which receptors may be exposed. (Note: receptors are assumed to be exposed to chemicals present in soil outside of the home and to dust [derived from outdoor soil] inside the home). In other words, no matter how often and how much receptors are exposed to soil, there is always more soil (and dust) to be exposed to. This assumption does not consider that the significant majority of soil and dust to which receptors may be exposed consists of soil located outside the home.

Risks characterized based on comparison to modified EPA Region 9 PRGs for dioxin are associated with significant uncertainties and are presented for comparison purposes only. The proposed dioxin slope factor ($1\text{E-}06 \text{ [mg/kg-day]}^{-1}$) is under review and may be modified as a result of this review by the National Academy of Sciences. Under EPA's 1998 dioxin policy, site remedies will be reconsidered if the dioxin reassessment results indicate there is a chance the remedies will not be considered protective.

In this exercise, it has been assumed that receptors are exposed only to dust within the home. As presented in Barr (2005) the amount of dust collected at the ten homes (pre-sieved) varied considerably from 41.5 grams at SR-RES13HD-04 to 1,693 grams at SR-RES20HD-08 - a range of about 400-fold. Similarly, dust loading varied from 6.9 grams per square meter (g/m^2) at SR-RES13HD-04 to 282.2 g/m^2 at SR-RES20HD-08 - a range of about 40-fold. It may be expected that there may be insufficient amounts of dust at some residences (even acknowledging some amount of continual dust replenishment) to support the degree of exposure inherently assumed in calculating residential PRGs. To the degree that

an insufficient amount of dust is present at a given residence, the risks calculated based on comparison to PRGs (both current and modified) may overestimate actual risks.

Generally, the diameter of dust particles is less the diameter of soil particles to which receptors may be exposed and that adhere to skin surfaces. As a result, differences are likely between the amount of dust adhering to skin (measured as milligrams per square centimeter) and the configuration of the particles on the skin (for example, a monolayer versus a multi-layered configuration). Adherence factors (AF) used in PRG calculations are based on experiments and observations regarding soil exposures. To the extent that a greater amount of the total amount of dust adhering to skin is actually contacting the skin, a greater amount of chemicals adhering to the particles may be absorbed into the body. In other words, the use of EPA-recommend AF values derived from soil exposure may underestimate the absorption of chemicals from dust particles.

The calculation of PRGs assumes some exposure due to inhalation of soil particulates that become airborne and are inhaled. The amount of airborne and breathable particles is estimated using a particulate emission factor (PEF). Use of such a factor with regard to potential indoor dust exposure introduces significant uncertainty. However, the contribution to the PRG based on inhalation exposure is typically minimal as compared to potential exposure through incidental ingestion and dermal contact. Therefore, uncertainty introduced by using PEFs is likely to be less than the two other sources of uncertainty discussed above.

Finally, although research is required to determine the most appropriate methods for estimating exposure to chemicals present in house dust, comparison to WTC screening values represents a technically appropriate methodology that incorporates both chemical concentrations in dust and dust loadings. The WTC screening values have also undergone a significant amount of peer review, both within the government and in the private sector. The use of comparisons to soil PRGs to characterize risks and hazards must be considered preliminary and associated with significant uncertainty. However, it should be noted that the risk and hazard results based on comparison to soil PRGs are similar to and confirm the results based on comparison to WTC screening levels.

REFERENCES

Barr Engineering Company (Barr). 2005. "Validated Analytical Data – House Dust." February 8.

- California Environmental Protection Agency (Cal/EPA). 2003. Toxics Criteria Database. Accessed on February 18, 2005. On-Line Address: <http://www.oehha.ca.gov/risk/chemicalDB/start.asp>
- International Paper Company (IP). 2004. "Human Health and Ecological Risk Assessment Work Plan, St. Regis Paper Company Site, Cass Lake, Minnesota." July 29.
- Tetra Tech EM Inc. (Tetra Tech). 2004. Records of Telephone Conversations Regarding Native American Lifestyles and Exposure Scenarios. Between Eric Morton, Senior Environmental Scientist and Shirley Nordrum, Environmental Director, Leech Lake Band of Ojibwe. Various Dates.
- U.S. Environmental Protection Agency (EPA). 1985. "Health Assessment Document for Polychlorinated Dibenzo-p-dioxins." Office of Health and Environmental Assessment. EPA Report No. 600/8-84/014.
- EPA. 1997a. "Health Effects Assessment Summary Tables, FY 1997 Update." Office of Solid Waste and Emergency Response (OSWER). EPA-540-R-97-036. July. As cited in EPA 2004a.
- EPA. 1997b. "Draft Standard Operating Procedures (SOPs) for Residential Exposure Assessment." Office of Pesticide Programs. December 19. As cited in EPA 2003a.
- EPA. 2001. Science Advisory Council for Exposure. Policy Number 12 on Recommended Revisions to the Standard Operating Procedures (SOPs) for Residential Exposure Assessment." February 22. As cited in EPA 2003a.
- EPA. 2003a. "World Trade Center Indoor Environmental Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks." Prepared by the Contaminants of Potential Concern (COPC) Committee of the World Trade Center Indoor Air Task Force Working Group. May. On-Line Address: http://www.epa.gov/wtc/copc_study.htm
- EPA. 2003b. "Exposure and Human Health Reassessment of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and Related Compounds, National Academy of Sciences Review Draft." December. On-Line Address: <http://www.epa.gov/ncea/pdf/dioxin/nas-review/#part1>
- EPA. 2003c. Memorandum Regarding Human Health Toxicity Values in Superfund Risk Assessments. From Michael B. Cook, Director, Office of Superfund Remediation and Technology Innovation. To Superfund National Policy Managers, Regions 1-10. OSWER Directive 9285.7-53. December 5.
- EPA. 2004a. "Region 9 PRGs 2004 Table." On-Line Address: <http://www.epa.gov/region09/waste/sfund/prg/files/04prgtable.pdf>
- EPA. 2004b. "User's Guide and Background Technical Document for USEPA Region 9's Preliminary Remediation Goals (PRG) Table." On-Line Address: <http://www.epa.gov/region09/waste/sfund/prg/files/04usersguide.pdf>
- EPA. 2005. Integrated Risk Information System (IRIS). On-Line Address: <http://www.epa.gov/iriswebp/iris/index.html>

**ATTACHMENT A
TABLE 1**

COMPARISON OF RESIDENCE-SPECIFIC SCREENING VALUES TO WORLD TRADE CENTER (WTC) SCREENING VALUES

Residence	WTC Settled Dust Screening Value^a and Modified Value^b - Dioxin (ng/m²)	Residence-Specific Screening Level - Dioxin^c (ng/m²)	WTC Settled Dust Screening Value^a - Arsenic (mg/m²)	Residence-Specific Screening Level - Arsenic^d (mg/m²)
5	2	5.00E-03	0.4	1.3
	5.7	5.00E-03		
9	2	23.1	0.4	3.1
	5.7	23.1		
14	2	7.3	0.4	0.31
	5.7	7.3		
15	2	6.8	0.4	0.29
	5.7	6.8		
16	2	10.2	0.4	0.6
	5.7	10.2		
20	2	32.7	0.4	1.6
	5.7	32.7		
12	2	1.7	0.4	0.36
	5.7	1.7		
13	2	8.00E-02	0.4	0.03
	5.7	8.00E-02		
17	2	1.1	0.4	0.39
	5.7	1.1		
18	2	0.65	0.4	0.29
	5.7	0.65		

Notes:

Shaded residence-specific screening levels are those that exceed the WTC settled dust screening values and modified values.

^a World Trade Center Indoor Air Task Force Working Group. 2003. "World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks." Contaminants of Potential Concern (COPC) Committee. May. On-Line Address: http://www.epa.gov/wtc/copc_benchmark.pdf. Note: these

^b The WTC settled dust screening value for dioxin (2 ng/m²) was modified to revise two parameters upon which the screening value was based: (1) the proposed dioxin slope factor of 1E+06 (mg/kg-day)⁻¹ was replaced with the currently approved EPA slope factor of 1.5E+05 (mg/kg-day)⁻¹ and (2) the 30 year exposure duration was replaced with a 70 year exposure duration. Specifically, the WTC settled dust screening value for dioxin was modified as follows: 2 ng/m² x 1E+06/1.5E+05 x 30/70 = 5.7 ng/m².

^c Calculated as Loading (g/m²) x Concentration (ng/kg) x 1E-03 kg/g, based on residence-specific loading and housedust concentrations as presented in Barr Engineering Co. 2005. Validated Analytical Data -- House Dust, Laboratory Batch Numbers: K2408652, St. Regis Paper Company Site -- Cass Lake, Minnesota. February 8.

^d Calculated as Loading (g/m²) x Concentration (mg/kg) x 1E-03 kg/g, based on residence-specific loading and housedust concentrations as presented in Barr Engineering Co.

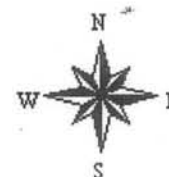
^e Results presented in format a/b, where a = risks based on current EPA slope factor for dioxin and b= risks based on alternate slope factor for dioxin.

Attachment B
St. Regis Paper Company Superfund Site
Cass Lake, Minnesota



0.3 0 0.3 Miles

Attachment C
St. Regis Paper Company Superfund Site
Cass Lake, Minnesota



-  **Dust Above Screen**
-  **Dust Below Screen**
-  **All Residents**
-  **Removal Areas**
-  **OU 7**
-  **Site Operations Areas**

0.3 0 0.3 Miles

Attachment D

St. Regis Paper Company Superfund Site

Option #4			
item	unit cost	# units	cost
house clean/carpet removal	\$3,127.09	40	\$125,083.60
new carpet	\$4,088.65	40	\$163,546.00
yard soil/seed	\$6,737.32	40	\$269,492.80
maint. House cleaning	\$1,606.95	40	\$64,278.00
debris removal	\$189.50	10	\$1,895.00
resident per diem	\$386.40	40	\$15,456.00
Road Dust Suppression			\$18,000.00
Total	\$16,135.91		\$657,751.40

Option #2			
item	unit cost	# units	cost
house clean/carpet removal	\$3,127.09	40	\$125,083.60
new carpet	\$4,088.65	40	\$163,546.00
resident per diem	\$386.40	40	\$15,456.00
Total			\$304,085.60

Option #3			
item	unit cost	# units	cost
house clean/carpet removal	\$3,127.09	24	\$75,050.16
new carpet	\$4,088.65	24	\$98,127.60
yard soil/seed	\$6,737.32	24	\$161,695.68
maint. House cleaning	\$1,606.95	24	\$38,566.80
debris removal	\$189.50	6	\$1,137.00
resident per diem	\$386.40	24	\$9,273.60
Initial Sampling ¹		30	\$51,200.00
Monitoring Sampling ²		16	\$185,400.00
Total			\$620,450.84

¹ Initial Sampling includes:

crew mobilization: (2 workers @ \$800/day + \$1,000 travel/each * 17 days: \$29,200)

data validation: (\$1000)

analyses: (30 samples @ \$600: \$18,000)

² Monitoring Sampling, 16 homes (qtrly Dec-May, Monthly Jun-Nov.) includes:

crew mobilization: (2 workers @ \$800/day + \$1,000 travel/each * 5 days * 9 mobilizations: \$90,000)

data validation: (\$1000 * 9 events: \$9,000)

analyses: (16 samples @ \$600 * 9 events: \$86,400)

Attachment D: Cost Estimate

Note: Disregard costs for crushed gravel road cover. Add road dust suppressant at an estimated cost of \$18,000.

St Regis Paper Co Superfund Site
Leach Lake Reservation
City of Cass Lake
Cass County, MN

Designed By: EPA
Estimated By: CENWO-ED-C

Prepared By: Dunn
Checked by Kemp

Preparation Date: 08/18/05
Effective Date of Pricing: 08/18/05
Est Construction Time: 180 Days

Sales Tax: 6.50%

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Release 1.2

Thu 18 Aug 2005
Eff. Date 08/18/05
PROJECT NOTES

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation
Engineer Estimate

TIME 10:55:10
TITLE PAGE 2

Project assumptions.

1. Initial house cleaning and carpet removal is considered to be hazardous work. Subsequent house cleaning will use HEPA vacuum but is considered non-hazardous work.
2. Carpet and pad to be replaced with better but not the highest quality available. Carpet waste considered non-hazardous.
3. Roads overlayed with 4" state spec class 5 gravel.
4. Yards will receive 4" of tested topsoil and seeding. No soil removal is anticipated. Sod is optional.
5. Contract method will be competitive bid for all 40 houses at once. Work to be done fall 2005.

SUMMARY REPORTS	SUMMARY PAGE
PROJECT OWNER SUMMARY - LEVEL 1.....	1
PROJECT INDIRECT SUMMARY - LEVEL 1.....	2

DETAILED ESTIMATE	DETAIL PAGE
1. House Clean & Carpet Removal.....	1
2. Carpet.....	2
3. Yard soil and seeding.....	3
4. Road Gravel.....	4
5. Maintenance House Cleaning.....	5
6. Yard Debris Removal.....	6
7. Resident Per Diem.....	7
10. Sod Option.....	8

BACKUP REPORTS	BACKUP PAGE
LABOR BACKUP - LEVEL 1.....	1

* * * END TABLE OF CONTENTS * * *

Thu 18 Aug 2005

Tri-Service Automated Cost Engineering System (TRACES)

TIME 10:55:10

Eff. Date 08/18/05

PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation

Engineer Estimate

SUMMARY PAGE 1

** PROJECT OWNER SUMMARY - LEVEL 1 **

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	\$IOH	TOTAL COST	UNIT COST
1 House Clean & Carpet Removal	40.00	EA	119,127	0	5,956	0	125,083	3127.09
2 Carpet	4500.00	SY	155,758	0	7,788	0	163,546	36.34
3 Yard soil and seeding	6300.00	CY	256,660	0	12,833	0	269,493	42.78
4 Road Gravel	11000.00	LF	103,839	0	5,192	0	109,030	9.91
5 Maintenance House Cleaning	1.00	YR	61,217	0	3,061	0	64,278	64277.88
6 Yard Debris Removal	10.00	EA	1,805	0	90	0	1,895	189.50
7 Resident Per Diem			14,720	0	736	0	15,456	
TOTAL St Regis Paper Co Superfund Site	1.00	EA	713,125	0	35,656	0	748,781	748781.46

***** ALTERNATES *****

10 Sod Option	52.00	MSY	56,427	0	2,821	0	59,248	1139.39
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Thu 18 Aug 2005
Eff. Date 08/18/05

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation
Engineer Estimate

TIME 10:55:10

SUMMARY PAGE 2

** PROJECT INDIRECT SUMMARY - LEVEL 1 **

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	USER DEF	TOTAL COST	UNIT COST
1	House Clean & Carpet Remo	40.00 EA	94,503	9,450	5,198	7,641	2,336	0	119,127	2978.18
2	Carpet	4500.00 SY	123,562	12,356	6,796	9,990	3,054	0	155,758	34.61
3	Yard soil and seeding	6300.00 CY	203,606	20,361	11,198	16,462	5,033	0	256,660	40.74
4	Road Gravel	11000.00 LF	82,374	8,237	4,531	6,660	2,036	0	103,839	9.44
5	Maintenance House Cleanin	1.00 YR	48,563	4,856	2,671	3,926	1,200	0	61,217	61217.03
6	Yard Debris Removal	10.00 EA	1,432	143	79	116	35	0	1,805	180.48
7	Resident Per Diem		14,720	0	0	0	0	0	14,720	
St Regis Paper Co Superfu		1.00 EA	568,761	55,404	30,472	44,794	13,694	0	713,125	713125.20

CONTINGENCY

35,656

TOTAL INCL OWNER COSTS

748,781

***** ALTERNATES *****

10	Sod Option	52.00 MSY	44,763	4,476	2,462	3,619	1,106	0	56,427	1085.14
CONTINGENCY									2,821	54.26
TOTAL INCL OWNER COSTS									59,248	1139.39

*** PROFIT WEIGHTED GUIDELINES ***

PROJECT: St Regis Paper Co Superfund Site ESTIMATED BY CENWO-ED-C
Leach Lake Reservation
City of Cass Lake
Cass County, MN

CHECKED BY: Dunn
Checked by Kemp

DATE: 01/15/05

PROFIT OBJECTIVE FOR: AA Prime - Enviromental-

FACTOR	RATE (%)		WEIGHT		VALUE
-----	-----		-----		-----
			(0.03 - 0.12)		
1. Degree of Risk	20	x	0.080	=	1.600%
2. Difficulty of Work	15	x	0.060	=	0.900%
3. Size of Job	15	x	0.090	=	1.350%
4. Period of Performance	15	x	0.040	=	0.600%
5. Contractor's Investment	5	x	0.050	=	0.250%
6. Assistance by Government	5	x	0.110	=	0.550%
7. Subcontracting	25	x	0.070	=	1.750%
	-----				-----
	100		PROFIT FACTOR:		7.000%

COMMENTS (Reasons for Weights Assigned):

Thu 18 Aug 2005

Tri-Service Automated Cost Engineering System (TRACES)

TIME 10:55:10

Eff. Date 08/18/05

PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation

DETAILED ESTIMATE

Engineer Estimate

DETAIL PAGE 1

1. House Clean & Carpet Removal

	QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST	UNIT COST
House Clean & Carpet Removal									
abat work area, eqpt			0.00	0.00	0.00	532.50	0.00	532.50	
mob fees & truck decontamination	1.00	LS	0	0	0	533	0	533	532.50
Hazmat abat work area, HEPA			0.01	0.21	0.00	0.05	0.00	0.27	
vacuum cleaning.	160000	SF	848	33,616	448	8,520	0	42,584	0.27
Walls, ceiling, floors, furniture, drapes, ductwork, assume 4000 sf ea x 40 = 160,000 sf									
abat work area,			2.00	79.19	11.01	154.43	0.00	244.62	
portable, decontn chamber	40.00	EA	80	3,167	440	6,177	0	9,785	244.62
abat work area, set up			1.86	72.97	0.00	0.00	0.00	72.97	
neg. air machine, 1-2k CFM	40.00	EA	74	2,919	0	0	0	2,919	72.97
Hazmat abat carpet removal			0.01	0.33	0.00	0.00	0.00	0.34	
40 x 1,000 sf = 40,000	40000	SF	340	13,368	176	0	0	13,544	0.34
Move Furniture			3.99	157.26	2.07	0.00	0.00	159.32	
	40.00	EA	160	6,290	83	0	0	6,373	159.32
Vidio tape & appliance check			3.99	157.26	2.07	10.65	0.00	169.97	
40 tapes x \$2 = 80	40.00	EA	160	6,290	83	426	0	6,799	169.97
1 camera \$320									
Rubbish handling, 50' haul, 2 mi			0.67	18.53	7.10	3.20	0.00	28.83	
loading & trucking, hand loading	370.00	CY	247	6,857	2,628	1,182	0	10,667	28.83
truck carpet disposal.									
Non-hazardous material.									
40,000 sf x .25 /27 =370 cy									
Hazmat abat furnace filter repl			0.28	11.03	0.14	10.65	0.00	21.82	
	40.00	EA	11	441	6	426	0	873	21.82
Toilet, portable chemical, rent			0.00	0.00	0.00	85.38	0.00	85.38	
per month	5.00	EA	0	0	0	427	0	427	85.38
TOTAL House Clean & Carpet Removal	40.00	EA	1,920	72,949	3,863	17,691	0	94,503	2362.57

4

	QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST	UNIT COST
Carpet									
1000 sf ea x 40 homes /9 = 4444 sy round up to allow for waste, use 4500 sy.									
Carpet, nylon			0.09	4.57	0.00	16.29	0.00	20.86	
Quote 8/11/05	4500.00	SY	424	20,565	0	73,325	0	93,890	20.86
Floor to Ceiling in Bemidji MN									
Linda 218-751-1063									
Shaw- Can Cun -Frieze style									
rated active to heavy use									
\$25.48/sy with pad installed.									
Average furniture move									
recommend using \$150/home.									
Carpet, tackless, sponge rubber			0.04	1.70	0.00	2.92	0.00	4.62	
pad, min, stretched instl,add to 4500.00 SY			158	7,650	0	13,131	0	20,781	4.62
above									
Move furnishings			4.59	222.26	0.00	0.00	0.00	222.26	
pad, min, stretched instl,add to 40.00 EA			183	8,890	0	0	0	8,890	222.26
above									
TOTAL Carpet	4500.00	SY	766	37,105	0	86,457	0	123,562	27.46

Thu 18 Aug 2005

Tri-Service Automated Cost Engineering System (TRACES)

TIME 10:55:10

Eff. Date 08/18/05

PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation

DETAILED ESTIMATE

Engineer Estimate

DETAIL PAGE 3

3. Yard soil and seeding

QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST	UNIT COST
--------	-----	---------	-------	----------	----------	------	------------	-----------

Yard soil and seeding

Assumed 1300sy x 9 x .333 /27 x 1.2 swell x 40 houses =6926 cy

Use 7000 cy split 90/10 between machine and hand work.

Seeding 1300 sy x 40 = 52,000 sy

Loam or topsoil, furnish & place, imported, 4" deep	6300.00 CY	0.09 581	3.93 24,787	1.57 9,921	15.98 100,643	0.00 0	21.48 135,350	21.48
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Quote 8/17/05 Bud Storlie
Storlie Const 218-335-6249

Loam or topsoil, furnish & place, spread by hand	700.00 CY	1.36 949	41.41 28,990	0.00 0	15.98 11,183	0.00 0	57.39 40,173	57.39
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Seeding, athletic field mix, 8#/MSFpush spreader	52.00 MSY	6.00 312	183.22 9,528	0.00 0	292.24 15,196	0.00 0	475.46 24,724	475.46
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Testing, misc sample collection (shallow), hourly rate, subcontracted	6.00 EA	0.00 0	75.00 450	0.00 0	0.00 0	0.00 0	75.00 450	75.00
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Testing, LAS, S&SA, dioxins, SW8280 Assume 1/1000 cy.	6.00 EA	0.00 0	0.00 0	0.00 0	0.00 0	485.00 2,910	485.00 2,910	485.00
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TOTAL Yard soil and seeding	6300.00 CY	1,843	63,755	9,921	127,021	2,910	203,606	32.32
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Thu 18 Aug 2005

Tri-Service Automated Cost Engineering System (TRACES)

TIME 10:55:10

Eff. Date 08/18/05

PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation

DETAILED ESTIMATE

Engineer Estimate

DETAIL PAGE 4

4. Road Gravel

	QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST	UNIT COST
--	--------	-----	---------	-------	----------	----------	------	------------	-----------

Road Gravel

Assumed 11,000 lf 20' wide at 4" depth. = 2,715 cy

Base course, gravel, bank run,			0.05	1.88	1.75	20.71	0.00	24.34	
compacted, 4" D, large areas.	2715.00	CY	130	5,101	4,754	56,239	0	66,094	24.34

Quote 8/12/05

Anderson Bros, Roger Irish

218-820-9954

Belly dumped delivered

\$20.70/cy @ 1.4 ton/cy

Grade & roll sub-base,			0.01	0.38	0.28	0.00	0.00	0.67	
large areas over 2500 SY	24445	SY	210	9,331	6,950	0	0	16,280	0.67

TOTAL Road Gravel	11000	LF	340	14,431	11,704	56,239	0	82,374	7.49
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Thu 13 Aug 2005

Tri-Service Automated Cost Engineering System (TRACES)

TIME 10:55:10

Eff. Date 08/18/05

PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation

DETAILED ESTIMATE

Engineer Estimate

DETAIL PAGE 5

5. Maintenance House Cleaning

	QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST UNIT COST

Maintenance House Cleaning								
Assumed twice a month April thru October 7 mo x 2 =14								
And quarterly during November thru March 2 qr x 1 = 2								

Total			16 per year.					
abat work area, eqpt			0.00	0.00	0.00	532.50	0.00	532.50
mob fees & truck decontamination	1.00	LS	0	0	0	533	0	533 532.50
Hazmat abat work area, HEPA			0.01	0.21	0.00	0.00	0.00	0.21
vacuum cleaning.	160000	SF	848	33,616	448	0	0	34,064 0.21
Walls, ceiling, floors,								
furniture, drapes, ductwork,								
assume 4000 sf ea x 40 =								
160,000 sf								
Hazmat abat furnace filter repl			0.28	11.03	0.14	10.65	0.00	21.82
40 houses x 16 cleanings =640	640.00	EA	179	7,058	93	6,816	0	13,967 21.82

TOTAL Maintenance House Cleaning	1.00	YR	1,027	40,674	541	7,348	0	48,563 48563.09

Thu 18 Aug 2005
Eff. Date 08/18/05
DETAILED ESTIMATE

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation
Engineer Estimate
6. Yard Debris Removal

TIME 10:55:10
DETAIL PAGE 6

	QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST	UNIT COST

Yard Debris Removal									
Rubbish handling, 50' haul, 2 mi			0.67	18.53	7.10	0.00	3.00	28.63	
loading & trucking, hand loading	50.00	CY	33	927	355	0	150	1,432	28.63
truck miscl yard disposal.									
Non-hazardous material.									
10 yards x assumed 5 cy = 50 cy									

TOTAL Yard Debris Removal	10.00	EA	33	927	355	0	150	1,432	143.17

Thu 18 Aug 2005
Eff. Date 08/18/05
DETAILED ESTIMATE

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation
Engineer Estimate
7. Resident Per Diem

TIME 10:55:10
DETAIL PAGE 7

	QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST UNIT COST

Resident Per Diem								
Assumed 40 x 4 persons x 2 days =320 days. GSA Minnesota rate used.								
Lodging assume each residence for two days, 40 x 2 = 80.								
Lodging			0.00	0.00	0.00	0.00	60.00	60.00
average productivity	80.00	EA	0	0	0	0	4,800	4,800 60.00
ME&I			0.00	0.00	0.00	0.00	31.00	31.00
average productivity	320.00	EA	0	0	0	0	9,920	9,920 31.00
* -----								
TOTAL Resident Per Diem			0	0	0	0	14,720	14,720

TOTAL St Regis Paper Co Superfund Site	1.00	EA	5,929	229,840	26,384	294,756	17,780	568,761 568760.52

Thu 18 Aug 2005

Tri-Service Automated Cost Engineering System (TRACES)

TIME 10:55:10

Eff. Date 08/18/05

PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation

DETAILED ESTIMATE

Engineer Estimate

DETAIL PAGE 8

10. Sod Option

	QUANTY	UOM	MANHOUR	LABOR	EQUIPMNT	MATERIAL	MISC	TOTAL COST	UNIT COST

Sod Option									
Sodding, 1" deep, over 8 MSF,			12.00	396.10	18.00	922.18	0.00	1336.29	
bluegrass sod, on level ground	52.00	MSY	624	20,597	936	47,954	0	69,487	1336.29
Quote Kosel Services 8/16/05									
Landscaping Rich Kosel									
218-755-9570 \$69,400 for									
52,000 sy delivered and									
installed.									
Seeding, athletic field mix,			6.00	183.22	0.00	292.24	0.00	475.46	
8#/MSFpush spreader	-52.00	MSY	-312	-9,528	0	-15,196	0	-24,724	475.46

TOTAL Sod Option	52.00	MSY	312	11,070	936	32,757	0	44,763	860.83

Thu 13 Aug 2005

Tri-Service Automated Cost Engineering System (TRACES)

TIME 10:55:10

Eff. Date 08/18/05

PROJECT C11706: St Regis Paper Co Superfund Site - Leach Lake Reservation

Engineer Estimate

BACKUP PAGE 1

** LABOR BACKUP - LEVEL 1 **

-----										**** TOTAL ****	
SRC LABOR ID	DESCRIPTION	BASE	OVERTM	TXS/INS	FRNG	TRVL	RATE UOM	UPDATE	DEFAULT	HOURS	

House Clean & Carpet Removal											
MIL B-ASBTSWKR	Asbestos Worker/-Haz Mtl Handler	18.21	0.0%	35.0%	3.30	11.38	39.26 HR	08/16/05	40.95	1678	
MIL B-LABORER	Laborers, (Semi-Skilled)	16.63	0.0%	36.4%	7.86	0.00	30.54 HR	08/16/05	27.04	185	
MIL B-TRKDVRHV	Truck Drivers, Heavy	14.05	0.0%	32.1%	0.00	0.00	18.56 HR	08/16/05	27.99	62	
Carpet											
MIL B-TILELYR	Tile Layers, (Floor)	28.86	0.0%	27.0%	11.80	0.00	48.45 HR	08/16/05	32.53	766	
Yard soil and seeding											
MIL B-EQOPRMED	Equip. Operators, Medium	28.90	0.0%	27.9%	11.70	0.00	48.66 HR	08/16/05	35.24	388	
MIL B-LABORER	Laborers, (Semi-Skilled)	16.63	0.0%	36.4%	7.86	0.00	30.54 HR	08/16/05	27.04	1455	
Road Gravel											
MIL B-EQOPRMED	Equip. Operators, Medium	28.90	0.0%	27.9%	11.70	0.00	48.66 HR	08/16/05	35.24	237	
MIL B-LABORER	Laborers, (Semi-Skilled)	16.63	0.0%	36.4%	7.86	0.00	30.54 HR	08/16/05	27.04	79	
MIL B-TRKDVRHV	Truck Drivers, Heavy	14.05	0.0%	32.1%	0.00	0.00	18.56 HR	08/16/05	27.99	26	
Maintenance House Cleaning											
MIL B-ASBTSWKR	Asbestos Worker/-Haz Mtl Handler	18.21	0.0%	35.0%	3.30	11.38	39.26 HR	08/16/05	40.95	1033	
Yard Debris Removal y /8hr =\$11.38											
MIL B-LABORER	Laborers, (Semi-Skilled)	16.63	0.0%	36.4%	7.86	0.00	30.54 HR	08/16/05	27.04	25	
MIL B-TRKDVRHV	Truck Drivers, Heavy	14.05	0.0%	32.1%	0.00	0.00	18.56 HR	08/16/05	27.99	8	
Resident Per Diem											
Sod Option											
MIL B-EQOPRLT	Equip. Operators, Light	24.35	0.0%	27.9%	11.70	0.00	42.84 HR	08/16/05	33.66	125	
MIL B-LABORER	Laborers, (Semi-Skilled)	16.63	0.0%	36.4%	7.86	0.00	30.54 HR	08/16/05	27.04	187	

Attachment E

RESPONSIVENESS SUMMARY

ST. REGIS SUPERFUND SITE
OPERABLE UNIT #7
LEECH LAKE INDIAN RESERVATION
CITY OF CASS LAKE
CASS COUNTY, MINNESOTA

SEPTEMBER 2005

RESPONSIVENESS SUMMARY

ST. REGIS SUPERFUND SITE OPERABLE UNIT #7 CASS COUNTY, MINNESOTA

1.0 OVERVIEW

At the start of the May 30, 2005, public comment period for the St. Regis Superfund site, the U.S. Environmental Protection Agency (EPA), with the concurrence of the Leech Lake Band of Ojibwe (LLB) and the State of Minnesota (MDNR), proposed an interim alternative to address dust contamination in the residences near the former operations area of the St. Regis Paper Company Site (the Site) on the Leech Lake Indian Reservation, in the City of Cass Lake, Cass County, Minnesota. This area has been named Operable Unit 7 (OU #7) by EPA. EPA's preferred alternative, as specified in the Proposed Plan, is to 1) replace carpet from the approximately 40 residences, 2) provide an initial house cleaning for dust removal, 3) provide periodic house cleaning until implementation of a final decision regarding further remedial action, 4) provide clean dirt fill cover and grass seed to the yards of those homes, and 5) apply a dust suppressant to the dirt roads adjacent to those homes.

After careful review of the comments received from the public during the public comment period and public meeting, EPA has modified the preferred remedy. Part 2 of the ROD explains in detail the content of the modified remedy.

Comments received at a June 7, 2005, public meeting in Cass Lake, Minnesota, and written comments reflected a nearly even split between support for EPA's proposed alternative with some modification (9 comments) and the option for permanent relocation of residents (11 comments).

This Responsiveness Summary responds to the comments and concerns expressed by the public and the potentially responsible parties (PRPs) in written and oral comments received by EPA during the public comment period, which ran from May 30 to July 8, 2005. A court reporter recorded spoken comments at a public meeting that was held on June 7, 2005.

Two sections follow:

- * Background on community involvement and history of community relations activities at the Site
- * Summary of comments received during the public comment period, including EPA responses

2.0 BACKGROUND ON COMMUNITY INVOLVEMENT/HISTORY OF COMMUNITY RELATIONS ACTIVITIES

See Part 2 of the ROD.

3.0 SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD

The public comment period designated for the St. Regis Paper Company Superfund site residential area (Operable Unit #7) was held from May 30 to July 8, 2005, and included a public meeting on June 7, 2005. Comments on the Proposed Plan received during the public comment period are listed below. Some of the comments have been paraphrased so they could be summarized effectively in this document. For original comments in their entirety, refer to the public meeting transcript and written comments which are available for review at public information repositories listed in Appendix A and in the U.S. EPA offices in Chicago, Illinois. In addition they can be viewed at the Site website: www.epa.gov/region5/sites/stregis/index.htm

An EPA response follows each comment. Comments and responses have been divided into four sections and are categorized by topic within each section, where appropriate. The four sections are:

- 3.1 Summary of comments from the local community
- 3.2 Summary of comments from elected government officials
- 3.3 Summary of comments from agency partners
- 3.4 Summary of comments from International Paper Company.

3.1 Summary of Comments from the Local Community

3.1.1 Reject EPA Preferred Option/Support Option 5, Permanent Relocation

3.1.1(a)

COMMENT: Eleven residents commented that EPA's proposed interim solution is a "band aid" to the problem rather than an effective method for reducing risk. These commenters preferred Option 5 which would involve the permanent relocation of the residents in Operable Unit #7.

RESPONSE: The interim action to be taken is in response to only a portion of a much larger human health and ecological risk assessment of the Site. At this time, the results of the full risk assessment are not complete. For that reason, only an interim response is planned to address the known human health risks posed by the presence of contaminated dust in houses. Because a more complete remedial response may result after the risk assessments are completed, they are intentionally narrow in focus. After the results of the risk assessment are available and when a final remedy is developed, a new list of options

could again include the option of permanent relocation.

3.1.2 Support EPA Preferred Option 4 with Modifications

Many residents accepted EPA's preferred option with modifications. The proposed changes are itemized below with EPA responses.

3.1.2(a)

COMMENT: A number of commenters agreed with EPA preferred Option 4 with the addition of some type of cover to the dirt roads which make up most of the streets in the neighborhood. Most comments stated that the dust that is generated by passing vehicles could very quickly reduce the effectiveness of any periodic cleaning of homes for dust.

RESPONSE: EPA agrees with the comment and has revised the recommended alternative to include a dust suppression application to dirt roads in the vicinity of the homes to further reduce the amount of potential dust. The addition of this action may further reduce the residents' risk of exposure to contaminated dust.

3.1.2(b)

COMMENT: Some commenters agreed with EPA's preferred option with the stipulation that the final action taken at the Site meets soil clean up standards consistent with the draft EPA Dioxin Reassessment or, according to some comments, with a level of 50 ppt.

RESPONSE: No decisions can be made at this time on a final remedy for the site. The results of the human health and ecological risk assessments must be evaluated before the development of potential options. Once the risk assessment has been evaluated, EPA will again develop a list of options to address any remaining risks to either the community or the local environment. That list will again be presented at a public meeting and community members will have an opportunity to express opinions on EPA's preferred option or other options.

3.1.2(c)

COMMENT: Some commenters felt that additional sampling of OU #7 residents garden produce was needed to better define the current health risks.

RESPONSE: The August 2004 UAO Risk Assessment Workplan included the collection of garden produce from nearby residents and local produce stands. EPA later decided not to sample the produce from residential gardens in the area (OU #7) because of the use of fireplace ash in the gardens which was confirmed by those residents. Fireplace ash may introduce non-site related dioxin to the garden soil, which would invalidate the sampling results for produce from those gardens.

3.1.2(d)

COMMENT: Some commenters requested that businesses located on the west side of Hwy 371 across from the Site be included in the OU #7 area residential properties. Another commenter asked whether businesses located within the residential area would be included in the remedy.

RESPONSE: One business is located within the Site area of OU #7 area. That business will be included in the work planned for the residences. There is, however, no reason to believe that businesses located on the west side of Hwy 371 have been impacted by the Site. Site-related sampling conducted on the east side of Hwy 371 south of 1st Street and near the highway show a maximum soil value of only 22 ppt for dioxin. For that reason, those businesses will not be included in the interim proposed action. Some actions may be considered for this area when a final remedy is planned.

3.1.2(e)

COMMENT: One commenter requested that high efficiency particulate air (HEPA) filter vacuum cleaners be used during the house cleaning for dust removal events.

RESPONSE: EPA will require that contractors performing house cleaning for dust removal use HEPA vacuum cleaners for this work.

3.1.2(f)

COMMENT: One commenter requested that geotextile fabric be used below the clean soil to be placed on residential yards as a part of the remedial action.

RESPONSE: The clean soil applied to yards is meant to provide only a shallow temporary barrier to residents from contaminated soil as an interim response. If soil removal is necessary as a part of a final action, any geotextile fabric would then also require disposal. EPA feels that actions taken should, as much as practicable, be compatible with final actions. Because of the interim nature of the soil cover, EPA feels that the use of geotextile fabrics below the soil is not necessary.

3.1.2(g)

COMMENT: One commenter recommended that the St. Regis Site be fenced while waiting for a final remedy due to the potential for residents to be exposed to contaminated soil on Site.

RESPONSE: This planned remedial work is a focused action that applies only to residential house dust exposures. Fencing may be included in future remedial work when addressing potential Site soil exposures.

3.1.2(h)

COMMENT: Two commenters recommended that additional outreach be conducted to the community in order for the residents to fully appreciate the potential exposure risks from dioxin.

RESPONSE: EPA will continue to cooperate with the Agency for Toxic Substances and Disease Registry (ATSDR) EPA's health agency, the Minnesota Department of Health staff, and local health providers within Cass Lake to communicate the cautions needed in dealing with dioxin contaminated soil, the potential health impacts from exposure to dioxin, and the ongoing work by EPA to reduce residents exposure.

3.1.3 Support Proposed Plan

3.1.3

COMMENT: One resident in a telephone conversation on June 23, 2005, supported EPA's plan as proposed.

RESPONSE: EPA agrees with the commenter and, with the modifications presented in Section 3.1.2, will implement the actions.

3.2 Summary of Comments from Elected Government Officials

3.2.1

Elaine Fleming

Mayor of the City of Cass Lake

COMMENT: The official position of the City of Cass Lake, in a letter dated July 7, 2005, supported EPA's preferred option with some comments. These were comments generated by the Minnesota Department of Health with which the City agreed. The City: 1) supports the use of HEPA vacuum cleaners in effected homes, 2) would like to see the Site expanded to include businesses near the Site, 3) recommended that the EPA communicate to residents why workers will be required to wear protective clothing, 4) requests that driveways and dirt roads be covered with clean soil/gravel to reduce dust generation, 5) would like EPA to fence the large areas of the Site that remain accessible to the public, 6) would like EPA to explain to the City and residents, in basic terms, the methodology used for the interim cleanup, 7) would like a geotextile fabric used below the temporary soil cover, and 8) would like any final remedy to take into account Minnesota and Leech Lake Band of Ojibwe laws and policies regarding land use and depth to contaminated soil, deed restrictions, and easements.

RESPONSE: Regarding HEPA vacuums, see the response to comment 3.1.2(e). Regarding including businesses, see the response to comment 3.1.2(d). Regarding communication with residents on the use of personal protective equipment, the EPA Remedial Project Manager and Community Involvement Coordinator will be available locally during the initiation of the remedial action to answer any questions from the public. In addition, the contractor selected for the action will establish a local telephone number for residents to call with any questions or concerns regarding the actions. Regarding dirt roads, see the response to comment 3.1.2(a). Regarding driveways, EPA will not include covering

driveways in the action because driving speeds are or should be significantly reduced in driveways, limiting the potential for dust generation. Regarding fencing of the Site, see the response to comment 3.1.2(g).

Regarding the request to explain, in basic terms the methodology used for the interim cleanup, an explanation follows. In addition, a public meeting will be held in Cass Lake prior to the initiation of work to further explain EPA's methodology and what will happen during the action.

EPA calculated health risks for residents of each home tested to date. The risk level for those residents is based on both the amount of dust found in the house and the level of dioxin found in the dust in that same house. The amount of dust varies depending on cleaning frequency, age of carpet, and other things. The goal of the interim action is to reduce the dust volume in homes, including contaminated dust, and reduce the potential ways for contaminated dust to get back in the house.

Regarding the use of geotextile fabric, see the response to comment 3.1.2(f). Regarding utilizing State of Minnesota or Leech Lake Band of Ojibwe laws and policies regarding land use and depth to contaminated soil, deed restrictions, and easements, EPA will promulgate a final decision after examining and considering ARARs. The final ROD will be consistent with CERCLA, the NCP, and all relevant federal laws and policies. See also the response to comment 3.1.2(b).

3.3 Summary of Comments from Agency Partners

3.3.1 Comments from Leech Lake Band of Ojibwe

3.3.1(a)

COMMENT: The Leech Lake Band of Ojibwe (LLB), in a letter from Shirley Nordrum to Tim Drexler of EPA dated July 8, 2005, concurred with U.S.EPA's preferred option for remedial actions at the Site, with the understanding that a final action is pending.

RESPONSE: A decision on the need for a final action (if any) will come at the conclusion of the Risk Assessments. See also response to comment 3.1.2(b).

3.3.1(b)

COMMENT: LLB commented that it reserves its right under 42 USC 9626(b) to seek permanent relocation of tribal members from the contaminated site to protect their health and welfare.

RESPONSE: At this time, EPA does not find that permanent relocation is necessary to protect the health and welfare of tribal members, based upon the available information. Therefore the proposed plan for this Site does not involve relocation to respond to risks from contaminated house dust; as such, CERCLA Section 126(b) is inapplicable.

Section 126(b) of CERCLA states:

Should the President determine that proper remedial action is the permanent relocation of tribal members away from a contaminated site because it is cost effective and necessary to protect their health and welfare, such finding must be concurred in by the affected tribal government before relocation shall occur. The President, in cooperation with the Secretary of the Interior, shall also assure that all benefits of the relocation program are provided to the affected tribe and that alternative land of equivalent value is available and satisfactory to the tribe. Any lands acquired for relocation of tribal members shall be held in trust by the United States for the benefit of the tribe.

If EPA had proposed permanent relocation as a remedial action or component at this Site, EPA would have sought the concurrence of the tribal government, as provided for in CERCLA Section 126(b).

3.3.1(c)

COMMENT: LLB comments that the remedial action should be completed by July 31, 2005.

RESPONSE: The EPA will work as quickly as possible in order to complete the remedial actions expeditiously. However, due to the inherent time constraints in the generation of Records of Decision, the action documented in the Interim ROD could not be implemented by July 31, 2005.

3.3.1(d)

COMMENT: LLB comments that the affected homes should be provided with air conditioning units to reduce recontamination from road dust blowing through open windows.

RESPONSE: See response to comment 3.1.2(a)

3.3.2 Comments from State of Minnesota

3.3.2(a)

COMMENT: The State of Minnesota Pollution Control Agency (MPCA), in a letter to EPA on July 8, 2005, concurred with EPA's preferred option, with comments. The MPCA states that they would like to see the remedial action completed by July 31, 2005.

RESPONSE: See response to comment 3.3.1(c)

3.3.2(b)

COMMENT: MPCA further comments that the homes with young children or daycare businesses receive the highest priority in the remediation schedule.

RESPONSE: EPA agrees with the comment and plans to conduct the remedial action with an emphasis on performing the remedial actions first to homes in the neighborhood with small children or

daycare providers.

3.4 Summary of Comments from International Paper Company

International Paper Company (IP) submitted several comments with supporting documentation on July 8, 2005. Most of the following comments are paraphrased from these documents.

3.4.1 Does not consider all relevant information

3.4.1

COMMENT: IP states that EPA did not consider all of the soil sampling conducted for dioxin on the residential properties before making the decision to apply the remedy to all of the homes. IP comments that it is likely that house dust concentrations in unsampled houses is similar to soil concentrations and that therefore house dust concentrations can be assessed using outdoor soil values.

RESPONSE: EPA acknowledges that the concentration of dioxin in outdoor soil may be predictive of the concentration of dioxin in indoor dust. However, no predictive relationship has been developed (nor is one likely to be developed based on the limited amount of available data) for identifying which of the unsampled residences have elevated dust loadings. Therefore, with no basis for identifying which of the remaining residences may have elevated dust loadings, EPA took the health protective approach of extending the response action to all of the remaining unsampled homes. In addition, there is enough uncertainty in the sampling conducted for house dust that EPA would not have considered risking additional contaminant exposure to the residents by concluding that no unsampled homes were affected after half of the 10 homes tested exceeded screening levels. House dust sampling did not take into consideration the season, temperature, precipitation, cleaning frequency, or many other variables that may have influenced the amount and, potentially, the concentration of contaminants in the samples taken. Also, as noted by IP, the highest risks were identified in residences with the highest dust loading densities. Based on existing data, there is no accurate way to predict which of the remaining unsampled residences have elevated dust loading densities that may contribute to significant risks. EPA would have considered it irresponsible to identify which of the unsampled residences required no action based on the small number of indoor dust samples collected to date.

3.4.2 No evidence of an actual or threatened release of arsenic so response action to address arsenic is not within EPA authority under CERCLA

3.4.2(a) IP states that EPA inappropriately identifies arsenic as a site-related contaminant and that there is no evidence that the arsenic concentrations found in indoor dust samples are related to the arsenic concentrations found in the residential soils.

RESPONSE: EPA is aware that the concentrations of arsenic found within the house dust of local residents does not appear to be related to the concentrations within residential soils. However, other variables including the methods used in soil vs. house dust sample collection may have resulted in the apparent discrepancy. In addition, studies have shown that the concentration of arsenic may be significantly higher in house dust as compared to yard soil (Paustenbach and others 1997). Finally, arsenic is known to have been a component of a chemical mixture used at the Site and has been identified as a chemical of potential concern (COPC) for the Site. As a result, EPA has conservatively retained arsenic as a COPC for indoor dust.

3.4.3 There is no compelling rationale for the proposal to implement immediate action, much less to all 40 homes

3.4.3(a)

COMMENT: IP comments that there is no compelling scientific rationale for EPA's proposal to implement immediate response actions at any of the residences based on the soil and house dust exposure methodologies specified in EPA's human health risk assessment work plan for the Site.

RESPONSE: Although it is true that long term human health risks, based on the methodologies cited in the August 2004 Risk Assessment UAO, are at unacceptable levels in fewer homes than those determined by the WTC methodologies, there are risks sufficient for action using the methodologies cited in the UAO. More importantly, however, EPA is required to use the best available science in determining risk. For that reason, EPA could not ignore the peer reviewed science presented in the WTC Indoor Environment Assessment once we were made aware of that document.

3.4.3(b)

COMMENT: IP further comments that extending the response action to the 40 homes in the neighborhood has no legitimate technical justification and is contradicted by the extensive dataset available.

RESPONSE: The response action was extended to the approximately 40 residents for two main reasons. The technical reason for extending the remedial action to the unsampled homes is due to the inherent uncertainty in the house dust sampling (See response to Comment 3.4.1). In addition, in adhering to the requirements outlined at 40 CFR 300.430(e)(9)(iii) for evaluating remedial alternatives, EPA's preferred alternative, Option 4, was a cost effective alternative to sampling the 30 unsampled homes, providing remedial measures to those homes exceeding risk-based limits, and then continuing a monitoring program in the homes that did not have exceedences due to sampling uncertainties. Monitoring, continuing until the final remedy, would have added significant costs and time in both sampling personnel, mobilization and laboratory analyses in addition to feelings of intrusion and anxiety that homeowners would experience in the periodic sampling of their homes.

3.4.4 Proposed Plan relies on flawed analyses and inappropriate characterizations of the risk posed by house dust

3.4.4(a)

COMMENT: IP comments that the use of risk-based benchmarks for settled dust developed for the World Trade Center (WTC) Indoor Environment Assessment (EPA 2003) does not take into account technical limitations of the method that result in gross overestimates of exposure to chemicals in house dust. IP states that the use of a linear relationship between house dust load and dust ingestion rate results in implausible daily dust ingestion rates at higher dust loads. IP states that because the house dust loading levels in the sampled homes had dust levels far above the average levels presented in the WTC study, they result in unrealistically high ingestion rates. IP states that for this reason the WTC approach should not be used as a basis for determining the need for response actions.

RESPONSE: The WTC methodology was not developed or applied based on using a default soil ingestion rate to calculate a limit for dust loading density. The key parameter is the mass of chemical per surface area available for exposure. The fact that the dust loadings were higher in the homes impacted by St. Regis contamination does not invalidate the applicability of the methods used in the WTC assessment. It is acknowledged that using these dust loading densities predicts higher soil ingestion rates than typical default values. However, these values are viewed as site-specific exposure estimates that are appropriate for this site. After consultation with the primary author of the WTC Indoor Environment Assessment, EPA confirms that the application of these methods to the St. Regis assessment can be supported.

EPA agrees with IP that the Cass Lake area near the former wood treatment site is an unusually dusty area due to many factors which include dirt roads, poor soil resulting in sparse vegetation, and modest homes, some of which are not air conditioned and so rely on open windows. It is because of these site-specific factors that dust ingestion rates, especially for children, may indeed be significantly above the average amount.

3.4.4(b)

COMMENT: IP comments that the very high settled dust loads in the homes that were sampled, together with the direct relationship between dioxin concentrations in soil and house dust, indicate that exposure is not limited by dust quantity and would not increase during the summer when more outdoor soil may be tracked into homes.

RESPONSE: This comment speculates on house dust seasonal variability without a basis in site-specific house dust sampling data. There is no data to make conclusions on seasonal variations in the levels of house dust. EPA must make conservative judgments, based on the information available, to

protect the health of residents exposed to contaminants found within their homes during the 2004 sampling event.

3.4.5 NCP requirement that interim measures be consistent with final remedies dictate that risk assessment be complete before any action

3.4.5(a)

COMMENT: IP comments that EPA's proposal to implement an interim response action without first performing an adequate technical analysis is inconsistent with EPA policy and guidance. IP continues that EPA's decision should await a comprehensive evaluation of all relevant data which will be presented in the risk assessment report.

RESPONSE: The St. Regis Site did not develop a risk assessment report prior to the initiation of remedial actions. Due to the recent determination through soil sampling conducted in 2001 and 2003 that aspects of the remedy were not protective, elements of a remedial investigation/ feasibility study (RI/FS), including human health and ecological risk assessments, are being conducted at the Site (UAO V-W-04-C-796). EPA guidance on the development of Records of Decision for remedial actions (EPA 540-R-98-031) states that preparation of an RI/FS report is not required for an interim action, only that there must be documentation that supports the rationale for the action within the Record of Decision. Therefore, actions can be taken prior to the development of the full risk assessment.

3.4.6 EPA's cost estimate is unrealistically low

3.4.6

COMMENT: IP comments that the information provided by U.S.EPA in a June 15, 2005 telephone conversation was insufficient to evaluate the cost-effectiveness of the alternatives developed under the proposed plan.

RESPONSE: As IP states, EPA provided IP with the general cost information used to generate the Proposed Plan. Although an estimate of costs is presented within the Proposed Plan, the Proposed Plan is not considered by EPA to be the definitive estimate of remedial action costs. According to EPA guidance (EPA 540-R-98-031), the Record of Decision serves as the primary data source for analyzing the costs of Superfund cleanups.

Adjustments to the estimated costs of the interim remedial alternatives have been made in the proposed Interim Record of Decision based on more detailed evaluations. An adequate rationale for our costs has been provided with the proposed remedy selection. The adjustments reflect new engineering information and additional work scope described in the Record of Decision under "Part 2 Decision Summary" within the section

titled "Documentation of Significant Changes." (See also Response to 3.1.2(a)).

3.4.7 Information in Proposed Plan is insufficient to allow a thorough technical review

3.4.7(a)

COMMENT: IP comments that the narrative contained for each alternative in the Proposed Plan is insufficient to evaluate the technical basis, implementability, and associated cost of each alternative. IP further comments that engineering/construction details are not presented in EPA's Proposed Plan.

RESPONSE: EPA representatives were available at the June 7, 2005 public meeting to answer questions and provide information on all aspects of the Proposed Plan. General information was also given to Tom Ross of International Paper in a telephone conversation with Tim Drexler on June 15, 2005. In addition, according to EPA guidance (EPA 540-R-98-031), the Proposed Plan is meant to briefly summarize alternatives highlighting the key factors that led to identifying the Preferred Alternative. As stated previously, an interim action does not require the full detail of a feasibility study, only that information required for the focused action.

The Proposed Plan for St. Regis contaminated house dust removal contained the necessary elements to judge the relative technical basis and implementability of each alternative. The limited actions to be taken on the site include removing and replacing carpet, providing clean dirt fill to yards and seeding, periodic house cleaning for dust removal, and applying a dust suppressant to nearby roads. None of these focused options contain elements with engineering requirements so difficult that the technical feasibility has any serious issues. Additional and more detailed engineering estimates are contained in the proposed Interim Record of Decision.

Regarding costs, please see response to comment 3.4.6.

3.4.7(b)

COMMENT: IP comments that Applicable and/or Relevant and Appropriate Regulations (ARARs) cannot be evaluated because they are not documented in the Proposed Plan.

RESPONSE: EPA evaluated the limited and focused actions proposed for the remedial actions and found that any potential ARARs for the work would be related to either the disposal of old carpet contained in the houses or to house cleaning for dust removal. Based on requests to other federal environmental programs and tribal and state partners, no ARARs regarding the disposal of the carpet or house cleaning for dust removal were identified. Therefore, no ARARs were presented in the Proposed Plan.

APPENDIX A
LOCATION OF
INFORMATION REPOSITORIES

An administrative repository contains laws, work plans, community relations plans, technical reports, and other documents relevant to the investigation and cleanup of Superfund sites. Repositories for the Site have been set up at the following locations:

Cass Lake Library
223 Cedar Ave.
Cass Lake, MN

Leech Lake Band of Ojibwe
Division of Resource Management Office
6530 Highway 2 N.W.
Cass Lake, MN

Cass Lake City Clerk
332 Second Street N.W.
Cass Lake, MN

Leech Lake Tribal College
113 Balsam Ave.
Cass Lake, MN

Bemidji State University Library
1501 Birchmont Drive N.E.
Bemidji, MN

In addition, an administrative record repository has been established at EPA's Region 5 office in Chicago, 77 West Jackson Blvd., Chicago, IL. Information is also contained at the Site website: www.epa.gov/region5/sites/stregis/index.htm.

REFERENCES

Barr Engineering Company (Barr). 2005. "Validated Analytical Data-House Dust" February 8.

International Paper (IP). 2004. "Human Health and Ecological Risk Assessment Work Plan, St. Regis Paper Company Site, Cass Lake, Minnesota." July 29.

McKinney J, Rogers, Metal Bioavailability, EPA Workshop Identified Research Needs, Environ. Sci. Technol. 26(7):1298-1299, 1992.

National Research Council (NRC), Recommended Dietary Allowances, 10th edition, Washington, DC: National Academy Press, 1989.

Paustenbach, D.J., B.L. Finley, and T.F. Long. 1997. "The Critical Role of House Dust in Understanding the Hazards Posed by Contaminated Soils." *International Journal of Toxicology*. Volume 16. Pages 339 through 362.

U.S. Environmental Protection Agency (EPA), Office of Solid Waste and Emergency Response. Risk assessment guidance for Superfund. Volume I. Human health evaluation manual. Supplemental guidance: Standard default exposure factors. Interim final. Washington, DC: U.S. Environmental Protection Agency. OSWER directive 9285.6-03, 1991.

U.S. Environmental Protection Agency (EPA), Office of Emergency and Remedial Response. Risk assessment guidance for Superfund. Volume I. Human health evaluation manual (Part A). Interim final. Washington, DC: U.S. Environmental Protection Agency. EPA/540/1-89/002, 1989.

U.S. Environmental Protection Agency (EPA), "World Trade Center Indoor Environmental Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks." World Trade Center Indoor Air Task Force Working Group, Contaminants of Potential Concern (COPC) Committee. May. On-Line Address: http://www.epa.gov/wtc/copc_benchmark.pdf

Statement of Work

St. Regis Paper Company Superfund Site Interim Remedial Action

General Description

The US EPA Region 5 has determined that due to dioxin and arsenic dust contamination, approximately forty (40) homes near the St. Regis Paper Company Site in Cass Lake, Minnesota, will require remedial cleanup work. The project will take place in all occupied residences and all those residences that can reasonably be expected to be occupied within 12 months of the effective date of the Order, where access has been granted to perform the work.

The pollution problems were caused by years of wood treatment at the St. Regis Paper Company property, now owned by International Paper Co. The group of homes (Operable Unit 7) is located south of the Burlington Northern railroad tracks, east of Route 371, north of that portion of the Chippewa National Forest due south of the City of Cass Lake, and west of the Pike Bay/Cass Lake water system.

The cleanup actions are a way to quickly lower exposure for residents while officials wait for the results of an in-depth study called a "human health and ecological risk assessment" (the assessment), which should be completed during the winter of 2005-06. The assessment will provide information to make final decisions about the entire site including OU 7.

Carpet removal and replacement with temporary relocation of the residents, household cleaning for purposes of contaminated dust removal, applying a dust suppressant to the unpaved roads within OU 7, and providing soil cover with grass seed is the option chosen by EPA to lower people's exposure to hazardous chemicals released by the wood treating operations. Houses, and particularly carpets and soft surfaces are reservoirs for house dust that serve as common exposure vehicles to young children (IDEQ, 2002). Studies have shown a significant reduction in contaminated dust with the removal of carpet. Cleaning, especially older carpets, may not be as effective (Ewers, et al., 1994). Cleaning of the home and ductwork using established methods has also been shown to reduce contaminated dust (IDEQ, 2002).

Dioxin sampling in roadside locations has resulted in soil removal actions due to exceedences of RALs. Dust suppression is necessary due to the likelihood of dust generation whenever automobile traffic passes through the neighborhood. Larger dust particles (PM10) are indicative of fugitive dust that could migrate and deposit in OU 7 area homes as shown in the human health Conceptual Site Model (EPA, 2004). In addition, the inhalation health effects associated with chemicals bound to inhalable particles (PM2.5) must be reduced.

Finally, the Respondent must also make reasonable accommodations for residents with special needs.

Objective

The Respondent must perform the remedial actions for the approximately 40 residences in OU 7 area within the timeframe specified below.

The Respondent must implement the following in meeting the objective:

Preparation Activities

- The Respondent must obtain a signed consent agreement from the owner (and occupant, if different) which: 1) identifies him/her as the owner (or occupant), 2) states that the owner/occupant agrees to the videotaping of the contents of the home, 3) identifies the agreed dates to perform the work, 4) states the owner/occupant agrees/disagrees to the use of wet washing methods (see Attachment 2A), 5) identifies the agreed color and texture of replacement carpet, 6) identifies the type of heating/air conditioning filters to be replaced in the home, 7) identifies sensitive (children and elderly) and high-risk (i.e. those with pre-existing medical conditions) residents, any other necessary information. The Respondent must provide copies these agreements to EPA.
- The Respondent must videotape all of the contents of every home and document turning on all electrical devices and appliances in case of damage claims, prior to performing any work and then again after the recarpeting and initial cleaning for dust. The Respondent must provide the original videos to EPA.

Removal and Replacement of Carpet and Initial Cleaning

- The Respondent must prioritize their actions with residences that have sensitive and/or high risk individuals.
- The Respondent must remove carpet and padding, according to Attachment 2A. The contaminant removal team must be HAZMAT certified and licensed. Work should occur Monday to Saturday.
- Residents, including pets, shall be temporarily relocated for the carpeting and initial cleaning unless the occupants make other arrangements. The Respondent must relocate the resident(s) during the carpet removal and installation within a reasonable commuting distance of the City of Cass Lake. Arrangements for reasonable commuting transportation, if necessary, during the time away from their homes must be made. Residents may stay at local hotels or stay with relatives/friends. Residents will receive the federal meal allowance while either in the hotel or with relatives/friends.
- Initial housecleaning for dust removal, prior to new carpet installation, must involve removal and replacement of heating/air conditioning filters, cleaning all duct work, and a

thorough cleaning of all potential areas of dust collection such as upholstery, rugs, and draperies with HEPA vacuum cleaners. Cleaning is to be in a manner consistent with Attachment 2A.

- The Respondent must install new carpet and padding, providing the resident(s) with reasonable choices of color and texture. The grade of new carpet must be at least as high as the quality of the removed carpet (for example nylon and rated for active to heavy use).

Provide Yard Cover

- The Respondent must provide clean topsoil to cover the yards and grass seed applied to reduce tracking contaminated soil into the home. Soil must be tested for dioxin/furans, metals, and PAHs using an EPA approved laboratory and methods, prior to application on yards.
- The Respondent must provide and apply a sufficient amount of soil for the application of grass seed or sod, but no less than 3 inches.
- The Respondent must remove and dispose of any debris in the yards. Any semi-permanent structures, including abandoned vehicles, would be left in place and soil placed around them.

Provide Periodic Housecleaning

- The Respondent must provide maintenance housecleaning, in accordance with Attachment 2B, for dust removal. The periodic housecleaning for dust shall continue until the implementation of a final remedy for OU 7 is completed. Maintenance housecleaning shall occur twice monthly from May 1 through October 31 and then quarterly cleaning shall occur from November 1 through April 30.

Apply Dust Suppressant to Neighborhood Roads

- The Respondent must apply an environmentally safe dust suppressant within 30 days of this Order, on the unpaved roads within OU 7, weather permitting. The suppressant must be capable of reducing fugitive dust emissions to at least an 80% $PM_{2.5}$ and PM_{10} Control Efficiency (EPA, 1997)(WRAP, 2004). This efficiency must be maintained on these unpaved roads until a final remedy is implemented.
- The roads include: South First Street, South Second Street, Balsam, Basswood, Grant Utley, Cedar, Central, Norway, Spruce, and Neils.

Deliverables

Prior to work the Respondent must provide the following to EPA:

1. Health and Safety Plan. The Respondent must provide EPA with an approved Health and Safety Plan.
2. Workplan. The Respondent must provide EPA with an approved workplan including schedule.
3. List of Sub-contractors. The Respondent must provide EPA with a list of subcontractors, if needed. The Respondent has one week after receipt of rejection to select an alternate sub-contractor, and provide that party's name to EPA.
4. Point of Contact to Public. The Respondent must have a point of contact in the City of Cass Lake for the purpose of answering any telephone questions on all working days from 8 am to 5 pm, regarding the operation during carpet replacement and yard cover. The Point of Contact can be located at an EPA-arranged space. The Respondent will provide a daily summary of public inquiries to the Remedial Project Manager via email message.

Schedule

Oversight will be conducted by EPA. An oversight contractor will conduct work site visual inspections on a daily basis.

Work will proceed according to the following schedule:

- Submit workplan to EPA within 21 days from effective date of the Order
- Finalize workplan within 5 days from receipt of EPA comments
- Begin indoor house work within 20 days from completion of final workplan
- Utilize a minimum of two indoor house crews operating simultaneously
- Work Monday to Saturday
- Complete all indoor work within 45 days from start of work on the first home unless owner/occupant schedules cause unavoidable delays. Any delay must be approved by EPA.

Management Controls

Respondent's staff must identify themselves at all times as Respondent personnel when performing their duties. Respondent staff must wear badges identifying themselves as Respondent personnel at all times when performing their duties.

References

EPA. 1997. U. S. Environmental Protection Agency Guidance for Network Design and Optimum Site Exposure for PM_{2.5} and PM₁₀. EPA-454/R-99-022. December 1997.

EPA. 2004. U. S. Environmental Protection Agency Unilateral Administrative Order for Human Health and Ecological Risk Assessment, www.epa.gov/region5/sites/stregis, August 11, 2004.

Ewers, Linda, Scott Clark, William Menrath, Paul Succop, and Robert Bornschein. 1994. "Clean-up of Lead in Household Carpet and Floor Dust." *American Industrial Hygiene Association*, vol. 55. p. 650-657.

Idaho Department of Environmental Quality (IDEQ). 2002. Bunker Hill House Dust Pilot Final Remedial Effectiveness Report, prepared by TerraGraphics Environmental Engineering, Inc. and the U.S. Army Corps of Engineers. December, 2002.

Western Regional Air Partnership (WRAP). 2004. WRAP Fugitive Dust Handbook. Prepared by Countess Environmental for the Western Governor's Association. www.wrapair.org/forums/dejf/fdh. November 15, 2004.

Attachment 2A

Initial Interior Dust Cleaning

A. Brief Description of Job:

This job will involve the following arsenic/dioxin dust hazard reduction measures:

1. Remove and replace all carpets, carpet pads, and tack strips in the living spaces of the above residences.
2. Remove all rugs and have them professionally cleaned.
3. Clean duct work in all homes to meet NADCA Standard ACR 2005 (NADCA 2004).
4. Clean all hard surfaces in living spaces (including attics and basements, if used for living space) per instructions.
5. Clean soft furniture per instructions.
6. EPA will provide oversight for cleaning. If dust is observed after EPA inspection, contractor will re-clean as necessary.
7. Any damage or loss that occurs during cleaning is the responsibility of the Respondent.
8. If in-house materials are suspected to contain asbestos or other hazardous materials, cleaning or air monitoring will cease until evaluated.

B. Schedule:

See Statement of Work.

C. Equipment and Materials:

HEPA vacuums, air filtration machines (if necessary), protective clothing (for some phases of the work), appropriate respirators (for some phases of the work), work gloves, mops, buckets, rags, TSP solution and other necessary cleaning items will be used during the dust reduction work process.

D. Crews:

The number of crews and number of crew members will be identified in the workplan. Crew members will identify themselves and carry visible identification at all times.

E. Competent Person:

An identified certified supervisor must be on site at all times and will act as the competent person for occupational, health and safety issues. This supervisor will conduct daily inspections of the work to ensure that the control measures, work practices, personal protective equipment, and hygiene facilities/procedures are being properly used.

F. Control Measures:

Removal, replacement, HEPA vacuuming and wet wash methods will be the control measures used for this project. Following is a step-by-step sequence of events and procedures that will be used to reduce the contaminated dust levels at the home sites.

1. Removal of rugs, carpets, and filters. On the first day of cleaning and prior to performance of any other work, the Respondent will remove all rugs, carpets, carpet pads, and carpet tack strips using the following procedure:
 - Make sure heating/air conditioning units are off, access agreement is signed, and house contents have been videotaped.
 - HEPA vacuum the entire surface area of the carpet.
 - Mist the entire surface area of the carpet with water to keep dust down.
 - Roll the carpet inward to avoid spreading dust to other areas.
 - Wrap carpet and pad in 6 ml. Polyethylene plastic sheeting. Tape the seams closed with duct tape.
 - Mist surface area of rugs, roll inward, wrap in 6 ml. Polyethylene plastic sheeting, remove, and have professionally cleaned.
 - Remove and replace all heating and air conditioning filters
 - Vacuum floor with a HEPA filter equipped vacuum cleaner after the carpet is wrapped, but before it is removed.
 - HEPA vacuum the floor again after the carpet is removed from the work area.
 - Workers will be in protective clothing and respiratory protection during the carpet removal process.

Upholstered furniture shall be HEPA vacuumed. Box springs and mattresses shall be cleaned using HEPA vacuum and wet wipe method, if wet wipe method is approved by owner/occupant.

2. Duct Work Cleaning. Upon completion of removal of rugs and carpets, a NADCA-certified contractor shall proceed with duct work cleaning. The duct cleaning contractor will provide heating/air conditioning duct cleaning as the first cleaning activity in the home. Their work will meet NADCA Standard ACR 2005. In addition, the exhaust duct work of dryer, stove, and bathroom vents, where accessible, will also be cleaned.
3. Cleaning of Soft Furniture and Hard Surfaces. Upon completion of the duct work, The Respondent will proceed with cleaning all soft furniture and hard surfaces in all living areas. Attics and basements will only be cleaned if they are used for living space. The Respondent will proceed in an orderly manner, processing throughout the house as described in Attachment B. The Contractor will follow the "rules of thumb" protocol. They are:
 - Always clean from top to bottom.
 - Always remove all visible dirt and dust.

- Wet washing/wiping will be performed with approval of the owner/occupant. Wet wiping **will not** be conducted in areas that owner/occupant determines would cause damage.
- All wet washing will be done with mild detergent soap, except in cases where this soap may damage paint.
- Always ***follow manufacturing instructions***.
- All dry vacuuming will be done with a HEPA vacuum.
- The cleaning sequence should be conducted in a manner that once a room is final cleaned it will not be re-entered by the cleaning crew.

G. DEFINITIONS:

Wet washing: Damp cotton rags, mops and cellulose sponges should be used, or else use equipment that will produce a mist, like a water spray bottle. Once the rag, mop, or sponge is moist, it should be rung out so water is not dripping, but only damp. Rinse the area after washing with clean warm water.

Wash Water: Should contain mild detergent soap. Read the manufacturer's instructions to insure solution does not damage painted walls and floors.

HEPA: High Efficiency Particulate Air filter. HEPA filters can remove fine dust particulates greater than 0.3 microns on diameter with 99.97% efficiency (Conlin et al. 1994, Farfel and Chisolm 1991). A HEPA vacuum cleaner will be required with a beater bar attachment for carpets and other attachments for walls, corners, etc.

Soft Furniture: Any furniture that is not wood, chrome, glass, or other non-absorbent material. Soft furniture refers to any furniture made of cloth, etc.

H. SPECIFIC PROCEDURES

After all residents have packed and moved for the duration of the cleaning, and all air duct cleaning has been completed, house cleaners will follow the specific procedures outlined below and following the "Rules of Thumb" mention above. Initially, a dry HEPA vacuuming of the entire home will be performed starting with the ceiling and proceeding down to the walls and the floors, vacuuming all knickknacks, books, tops of clothes hanging in closets, window sills and wells, furniture, and carpets (Milar and Mushak 1982, Farfel and Chisolm 1991, Goulet et al. 1996, Dixon et al. 1991). When the initial vacuuming is done, then follow the specific vacuuming and cleaning procedures outlined below:

- a) **Ceilings:** Ceilings will be vacuumed first then wet washed. Asbestos containing ceilings will not be cleaned. Ceiling fans will be wet washed and the outside of the motor or any other part that cannot be wet washed will be HEPA vacuumed. Light fixtures will be taken down and wet washed. When cleaning

ceiling fans and light fixtures, all electrical switches should be turned off or unplugged. Cracks or leaks to the living area should be reported to oversight personnel and the homeowner will be advised.

- b) *Walls:* Remove all wall hangings first. Wet wash all painted and smooth (wallpapered and paint) walls, doors and door trim, vacuum wood paneled walls. Vacuum books and remove from shelves, remove and wet wash knickknacks, and then wet wash all flat surfaces (bookshelves, etc.). Replace all knickknacks and books after cleaning. Any light fixtures on the walls should also be wet washed. When wet washing wallpapered surfaces, caution should be used so no damage occurs to the wallpaper, especially around seams. Test a small inconspicuous area first. Walls will be HEPA vacuumed and wet washed.
- c) *Wall Hangings and Lampshades:* Wall hangings (i.e. pictures, etc.) should be carefully cleaned so as no damage occurs (i.e. the frame lightly dusted with a wet sponge or cloth and if the picture is not covered by glass, then lightly vacuumed) and replaced. Any mirrors on the wall should also be cleaned first by wet washing, and then washed again with window cleaner.
- d) *Fireplaces and Wood Stoves:* These should all be vacuumed (and wet washed if a hard smooth surface). Wood boxes and stacked wood piles should be moved and the floor underneath should be cleaned (according to this protocol) and the pile replaced when the floor is dry.
- e) *Windows:* Drapes and curtains will be HEPA vacuumed, removed, wrapped in plastic, and professionally cleaned; HEPA vacuum and wet wash blinds. HEPA vacuum and wet wash all interior window wells, sills, and trim; wet wash window (inside and out) then wash again using window cleaner; remove and wet wash screens. Follow these procedures for sliding glass doors also. Replace blinds and drapes after cleaning.
- f) *Furniture:* Vacuum (5 seconds for a one foot pass), in one direction (horizontally) and then opposite (vertically), all soft surface furniture (couches, recliners, etc.) and then steam clean in the same manner (move nozzle in one direction and then go over again in the opposite direction). Couch cushions should be cleaned on both sides (i.e. all outside edges). Removable covers on cushions should be taken off and washed, along with any quilts, blankets or Afghans that normally lay on the furniture. Follow all manufacturing instructions for pillows, quilts, blankets and Afghans. Toss pillows should with be washed in washing machine or cleaned on the same manner as furniture. Procedures and techniques should follow the Institute of Inspection Cleaning and Restoration (IICRC) S300 upholstery cleaning standard. Hot water extraction is preferred, using a high-phosphate or other

mild detergent wash. If used, hot water injection rate must be greater than or equal to 300 psi, the water temperature must be greater than or equal to 200 degrees F, and water recovery must be 75% or greater. If hot water extraction is not the preferable method for the fabric type then the IICRC S300 standard will be followed. Mattresses and box springs will be dry vacuumed on all outer surfaces. All hard furniture (wood, glass, chrome, etc.) should first be vacuumed then wet washed from top to bottom.

- g) *Large Appliances:* All appliances should be unplugged prior to cleaning. TVs, VCRs, stereos, computers, etc. should be vacuumed (and wet washed if possible) on all sides and underneath. Appliances should be moved in order to vacuum and wet clean underneath. Larger appliances such as refrigerators, washers, dryers, dishwashers, etc. should be wet washed on the outer surfaces, and coils and motors should be vacuumed. Lint trap in dryers should be cleaned and vacuumed. These appliances should also be moved in order to clean underneath and behind.
- h) *Cupboards, Drawers and Closets:* Remove all belongings and valuables from kitchen, bathroom and other room cupboards, drawers and closets. Vacuum the tops, outside surfaces and inside surfaces of the cupboards and drawers, then wet wash. Closets should be cleaned in the same manner as the walls, floors and bookshelves.
- i) *Floors:* All furniture will be moved to allow thorough cleaning of the floor underneath and then replaced to its original position. Hard wood and linoleum floors should first be dry vacuumed and then wet mopped with the mild soap solution, again in one direction and then the opposite direction, and then mopped again with a clean water rinse. All throw rugs will be laundered.
- j) *Basements/Attics:* If the basement or attic is used for living space, then it will be cleaned according to the protocols above.
- k) *Enclosed Porches and Mudrooms:* These areas will be HEPA vacuumed and wet cleaned if used for anything besides storage. This includes moving any woodpiles, etc., cleaning underneath, and replacing to original positions.
- l) *Bathrooms:* Bathrooms will be cleaned according to the protocols above. Tile and/or linoleum will be HEPA vacuumed and then wet mopped in one direction and then the other, then rinsed with clean water. Mirrors and fans should also be wet washed. The outside of medicine cabinets and cupboards/towel storage should also be wet washed.
- m) *Pet Furniture:* If the pet furniture has a removable cover, then it will be taken off and laundered. Cat perches and carpeted scratched pads should also be vacuumed and steam cleaned. All other soft pet furniture should at least be vacuumed.

- n) *Miscellaneous*: All heater registers, bathroom fans, kitchen fans, lint traps should be cleaned and then vacuumed. If wheelchair ramps are present inside the home, they should also be cleaned according to protocols above. Stair banisters should also be vacuumed and wet washed. Stairs should be cleaned according to the protocol for floors. Baseboard heaters should also be vacuumed then wet washed. It is recommended that all electricity be turned off prior to cleaning baseboard heaters.
- o) *Attached garage*: Any throw rugs present in an attached garage should be laundered. If entrance pads are not available for the door to the garage, they will be provided by Respondent.
- p) *Disposal of cleaning supplies*: Dirty wash water will be disposed of properly. Used mop heads and rags will be placed in disposal bags and taken to a proper disposal site with the rest of the household waste from this project. Wash water will be changed after every room. New mop heads, rags, sponges and gloves will be used at each house.

I. Respirators:

All individuals in the work area will be provided with a NIOSH/MSA approved half mask, air purifying respirator equipped with HEPA cartridges or a powered air purifying respirator.

Respirators will be provided in the context of a complete respiratory protection program.

Respirators will be required during the carpet removal process and the initial HEPA vacuuming sequence.

Respirator use during wet washing and the final HEPA vacuuming process will not be required.

J. Protective Clothing:

Disposable clothing will be worn during the carpet removal process and the initial HEPA vacuuming sequence. If visibly contaminated with dust, protective clothing will be HEPA vacuumed before it is removed. Disposable clothing will be placed in a disposal bag and disposed of at an appropriate disposal site.

K. Hygiene Facilities:

Hand washing facilities, provided by the Respondent, will be used to decontaminate workers since the contaminated dust levels are expected to be low. Hot water, soap and towels must be provided by the contractor. Hands and face will be washed before all breaks and at the end of each day. Waste water will be disposed of properly.

L. Air Monitoring Data:

Initial OSHA personal air monitoring will be conducted on a representative number of employees to determine exposure levels. Results of air monitoring will be made available to EPA as soon as possible.

M. Training:

All workers requiring respirators and PPE will be HAZMAT certified. All workers performing initial housecleaning will be certified, for example, lead certified, in indoor contaminated dust removal.

References

- Conlin, R., C. Cooper, P. Dickey, J. Doyle, A. Duggan, A. Frahm, S. Gilbert, K. Hagelstein, D. Monroe, J. Roberts, R. Schmitt, and S. Swanson. 1994. *Training for the Master Home Environmentalist Program*, 4th edition. Philip Dickey, ed.
- Dixon, Sherry., E. Tohn, R. Rupp, and S. Clark. 1999. "Achieving Dust Lead Clearance standards After Lead Hazard Control Projects: An Evaluation of the HUD-Recommended Cleaning Procedure and an Abbreviated Alternative." *Applied Occupational and Environmental Hygiene*, vol.14.p.339-344.
- Farfel, Mark R., and J. Julian Chisolm, Jr. 1991. "An Evaluation of Experimental Practices for Abatement of Residential Lead-Based Paint: Report on a Pilot Project." *Environmental Research*, vol.55.p.199-212.
- Goulet, Lise., and Alain Messier. 1996. "Results of a Lead Decontamination Program." *Archives of Environmental Health*, vol.51.no.1.p.68-72.
- Institute of Inspection, Cleaning and Restoration Certification (IICRC) S300. 1997. Standard and Reference Guide for Professional Upholstery Cleaning. www.cleancareseminars.com/iicrc_s300_standard_reference_guide_for_upholstery_cleaning.htm.
- Lead Free Kids, Inc. December 1990. *Abatement Worker: Lead Prevention Guide*.
- Milar, C.R., and P. Mushak. 1982. "Lead Contaminated House Dust: Hazard, Measurement and Decontamination." In: *Lead Absorption in Children*, J. Chilsom and D. O'Hara, editors. Baltimore: Urban & Schwarzenberg, 143-152.
- National Air Duct Cleaners Association (NADCA) 2004. ACR 2005. Assessment, Cleaning, & Restoration of HVAC Systems, An Industry Standard Developed by the National Air Duct Cleaners Association. Published by NADCA. Washington D. C.

Attachment 2B

Supplemental Periodic Cleaning

RULES OF THUMB:

- Always clean from *top to bottom*.
- Always *remove all visible dirt and dust*.
- All *wet washing* should be done with *mild detergent soap, except in cases where this soap may damage paint*.
- Wet washing/wiping will be performed with approval of the owner/occupant. Wet wiping *will not* be conducted on surfaces that the owner/occupant determines would cause damage.
- Always *follow manufacturing instructions*.
- All dry vacuuming should be done with *a HEPA filter vacuum*.

DEFINITIONS:

Wet washing: Damp cotton rags, mops and cellulose sponges should be used, or else use equipment that will produce a mist, like a water spray bottle. Once the rag, mop, or sponge is moist, it should be rung out so water is not dripping, but that it is only damp. Rinse the area after washing with clean warm water.

Wash Water: Should contain mild detergent soap. Test small patches first, if necessary to insure solution does not damage painted walls and floors.

HEPA: High Efficiency Particulate Air filter. HEPA filters can remove fine dust particulates greater than 0.3 microns on diameter with 99.97% efficiency (Conlin et al. 1994, Farfel and Chisolm 1991). A HEPA vacuum cleaner will be required with a beater bar attachment for carpets and other attachments for walls, corners, etc.

Soft Furniture: Any furniture that is not wood, chrome, glass, or other non-absorbent material. Soft furniture refers to any furniture made of cloth, etc.

SPECIFIC PROCEDURES

Cleaners will follow the specific procedures outlined below and following the "Rules of Thumb" mention above.

1. **Ceilings:** When cleaning ceiling fans and light fixtures, all electrical switches should be turned off or unplugged. Vacuum then wet wash ceilings. Only vacuum drop and acoustical ceilings. Asbestos ceilings will not be cleaned. Wet wash all ceiling fans and vacuum the outside of the motor or any other parts that cannot get wet washed. Cracks or leaks to the living area should be reported to oversight personnel and the homeowner will be advised.

2. *Walls:* Walls will be HEPA vacuumed and wet washed. Care will be taken so as not to damage wall papered surfaces. Wet wash all flat surfaces (bookshelves, etc.). Any light fixtures on the walls should also be wet washed. Wall hangings (i.e. pictures, etc.) should be carefully cleaned so as no damage occurs (i.e. the frame lightly dusted with a wet sponge or cloth and of the picture is not covered by glass, then lightly vacuumed) and replaced. When wet washing wallpapered surfaces, caution should be used so no damage occurs to the wallpaper, especially around seams. Test a small inconspicuous area first.
3. *Windows:* Vacuum drapes and curtains; wet wash blinds. Wet wash all interior window wells, sills, and trim; wet wash window (inside and out) then wash again using window cleaner; remove and wet wash screens. Follow these procedures for sliding glass doors also.
4. *Furniture:* HEPA vacuum (5 seconds for a one foot pass), in one direction (horizontally) and then opposite (vertically), all soft surface furniture (couches, recliners, etc.)
5. *Appliances:* All appliances should be unplugged prior to cleaning. TVs, VCRs, stereos, computers, etc. should be vacuumed (and wet washed if possible) on all sides. Appliances should be moved in order to vacuum and wet clean underneath. Larger appliances such as refrigerators, washers, dryers, dishwashers, etc. should be wet washed on the outer surfaces, and coils and motors should be vacuumed. Lint trap in dryers should be cleaned and vacuumed.
6. *Wall Hangings and Lampshades etc. and Fireplaces and Wood Stoves:* These should all be vacuumed (and wet washed if a hard smooth surface). Any mirrors on the wall should also be cleaned first by wet washing, and then washed again with window cleaner.
7. *Cupboards, Drawers, and Closets:* Vacuum the tops and outside surfaces of the cupboards and drawers, then wet wash. Closets should be cleaned in the same manner as the walls, floors and bookshelves.
8. *Floors:* All furniture will be moved to allow thorough cleaning of the floor underneath and then replaced to its original position. All carpets should be vacuumed first and then cleaned using hot water extraction (i.e. steam cleaning). Vacuuming should occur first in one direction (horizontally) and again in the opposite direction (vertically). Detergents used for steam cleaning should also contain a mild soap solution. The IICRC S001 Carpet Cleaning Standard should be followed. Hot water injection rate must be greater than or equal to 300 psi, the water temperature must be greater than or equal to 200 degrees F, and water recovery must be 75% or greater. If hot water extraction is not possible for the carpet type then follow the IICRC S001 standard protocols. Hard wood and linoleum floors should first be dry vacuumed and then wet mopped with the mild soap solution, again in one direction and then the opposite direction, and then mopped again with a clean water rinse. All throw rugs will be laundered.
9. *Basements/Attics:* If the basement or attic is used for living space, then it should also be cleaned according to the protocols above.
10. *Enclosed porches and mudrooms:* These should be vacuumed and wet cleaned if used for anything besides storage.

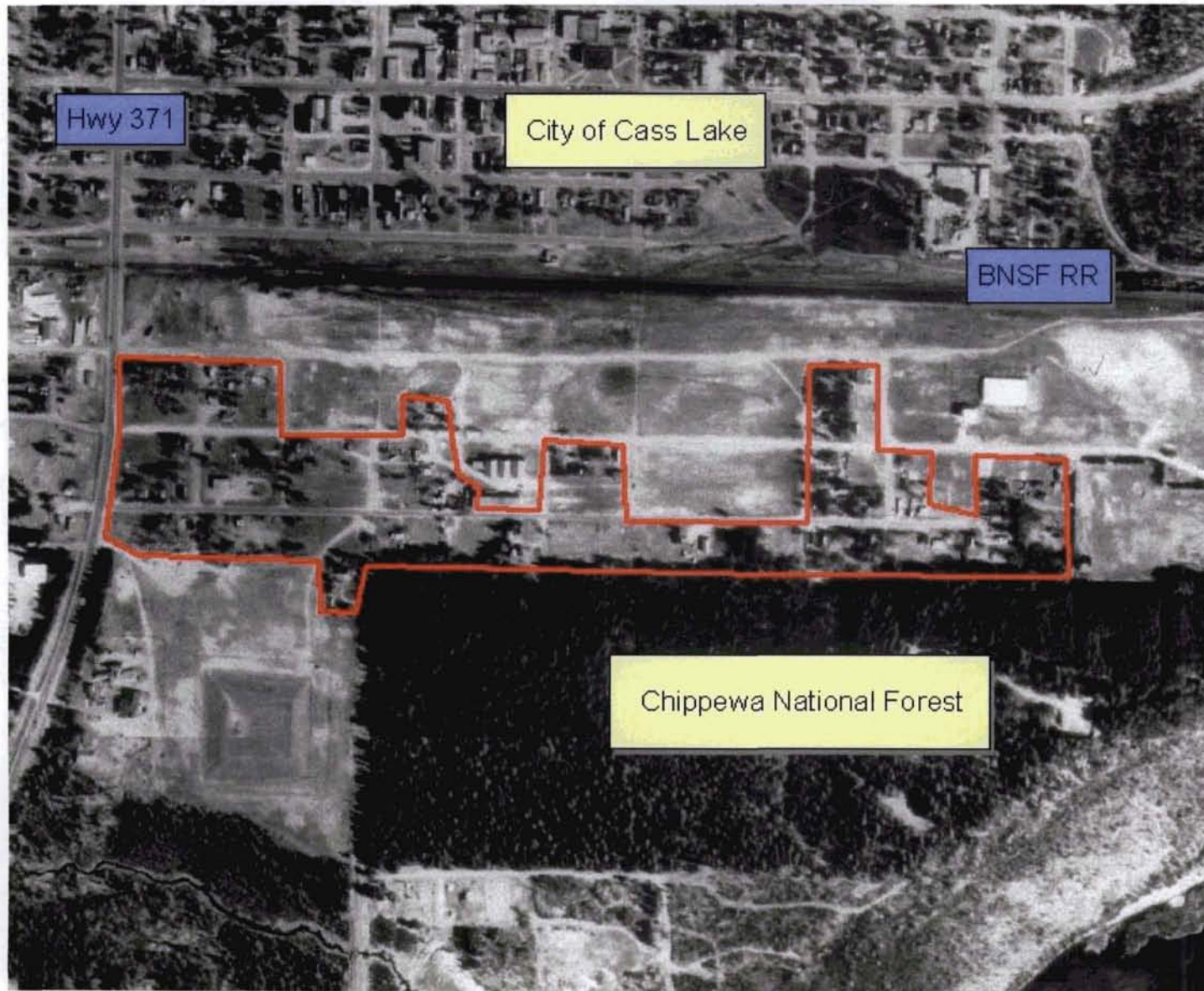
11. *Bathrooms*: Bathrooms should be cleaned according to the protocols above. Tile and/or linoleum should be vacuumed and then wet mopped in one direction and then the other. Mirrors and fans should also be wet washed. The outside of medicine cabinets and cupboards/towel storage should also be wet washed.
12. *Pet Furniture*: If the pet furniture has a removable cover, then it will be taken off and laundered. Cat perches and carpeted scratched pads should also be vacuumed. All other soft pet furniture should at least be vacuumed.
13. *Miscellaneous*: All heater registers, bathroom fans, kitchen fans, lint traps should be cleaned and then vacuumed. If wheelchair ramps are present inside the home, they should also be cleaned according to protocols above. Stair banisters should also be vacuumed and wet washed. Stairs should be cleaned according to the protocol for floors. Baseboard heaters should also be vacuumed then wet washed. It is recommended that all electricity be turned off prior to cleaning baseboard heaters.
14. *Attached garage*: Any throw rugs present in an attached garage should be laundered. If entrance pads are not available for the door to the garage, they will be provided.
15. *Disposal of cleaning supplies*: Properly dispose of dirty wash water. Used mop heads and rags shall be thrown away and taken to an appropriate disposal site with the rest of the household waste from this project. New mop heads, rags, sponges and gloves will be used at each house.

References

- Conlin, R., C. Cooper, P. Dickey, J. Doyle, A. Duggan, A. Frahm, S. Gilbert, K. Hagelstein, D. Monroe, J. Roberts, R. Schmitt, and S. Swanson. 1994. *Training for the Master Home Environmentalist Program, 4th edition*. Philip Dickey, ed.
- Dixon, Sherry., E. Tohn, R. Rupp, and S. Clark. 1999. "Achieving Dust Lead Clearance standards After Lead Hazard Control Projects: An Evaluation of the HUD-Recommended Cleaning Procedure and an Abbreviated Alternative." *Applied Occupational and Environmental Hygiene*, vol.14.p.339-344.
- Farfel, Mark R., and J. Julian Chisolm, Jr. 1991. "An Evaluation of Experimental Practices for Abatement of Residential Lead-Based Paint: Report on a Pilot Project." *Environmental Research*, vol.55.p.199-212.
- Goulet, Lise., and Alain Messier. 1996. "Results of a Lead Decontamination Program." *Archives of Environmental Health*, vol.51.no.1.p.68-72.
- Lead Free Kids, Inc. December 1990. *Abatement Worker: Lead Prevention Guide*.
- Milar, C.R., and P. Mushak. 1982. "Lead Contaminated House Dust: Hazard, Measurement and Decontamination." In: *Lead Absorption in Children*, J. Chilsom and D. O'Hara, editors. Baltimore: Urban & Schwarzenberg, 143-152.

Attachment 3

St. Regis Paper Company Superfund Site Cass Lake, Minnesota Operable Unit (OU) 7



0.3 0 0.3 Miles

A scale bar is located at the bottom of the map. It is a horizontal line with tick marks at 0.3, 0, and 0.3 miles, indicating the distance between the site and the surrounding areas.

 Operable Unit 7

Appendix 1

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTIONADMINISTRATIVE RECORD
FOR
ST. REGIS PAPER COMPANY
CASS LAKE, CASS COUNTY, MINNESOTAORIGINAL
(RECONSTRUCTED)
MARCH 27, 2000

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	02/26/85	Minnesota Pollution Control Agency (MPCA) and Champion International Corporation	File	Response Order by Consent between Champion Inter- national Corporation and MPCA for the St. Regis Paper Company Treatment Facility Area	76
2	02/26/85	MPCA and Champion International Corporation	File	Response Order by Consent between Champion Inter- national Corporation and MPCA for the St. Regis Paper Company Dumping Area	61
3	03/05/86	MPCA	File	Minnesota Enforcement Decision Document for the St. Regis Paper Company Site	39
4	06/00/86	Barr Engineering Company	Champion International Corporation	Response Action Plan for Contaminated Groundwater at the Cass Lake Treating Facility Site	107
5	06/00/86	Barr Engineering Company	Champion International Corporation	Response Action Plan for Sludge and Contaminated Soil at the Cass Lake Treating Facility Site	219
6	07/29/86	MPCA	File	Minnesota Enforcement Decision Document for the Former Cass Lake City Dump Site	9
7	03/00/87	Barr Engineering Company	Champion International Corporation	Response Action Plan for Contaminated Groundwater at the City Dump Pit Site in Cass Lake	88
8	12/03/93	Neidergang, N., U.S. EPA	Scherkenbach, T., MPCA	Letter re: RCRA Post- Closure Permit for the St. Regis Paper Company Site	2

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
9	01/28/94	Muno, W., U.S. EPA	Ross, T., Champion International Corporation	Letter re: U.S. EPA Strategy for the St. Regis Paper Company Site	2
10	04/00/94	Barr Engineering Company	Champion International Corporation	Annual Monitoring Report for Groundwater and Surface Water Monitoring at the Cass Lake Sites (January-December 1993)	664
11	07/00/94	Barr Engineering Company	Champion International Corporation	Semi-Annual Progress Report for the Cass Lake Sites (January-June 1994)	181
12	09/00/94	Barr Engineering Company	Champion International Corporation	Semi-Annual Report: Con- taminated Soil Containment Vault for the Cass Lake Sites (January-June 1994)	81
13	09/15/94	Traub, J., U.S. EPA	Warner, J., MPCA	Letter re: Change in the Lead Agency Designation for the St. Regis Paper Co. Superfund Site	2
14	09/19/94	Muno, W., U.S. EPA	Scherkenbach, T., MPCA	Letter re: Federal Superfund Jurisdiction over the St. Regis Paper Company Site	2
15	09/30/94	Bremer, K. U.S. EPA	Ross, T., Champion International Corporation	Letter: Recission of U.S. EPA's May 16, 1994 Request for Submittal of a Revised Part B Permit Application for the St. Regis Paper Company Site	2



179635

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTIONADMINISTRATIVE RECORD
FOR
ST. REGIS PAPER COMPANY
CASS LAKE, MNUPDATE #1
JULY 23, 2003

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	11/19/94	Ross, T., Champion International Corporation	Martin, L., U.S. EPA	Letter re: Champion's Comments on the Draft CERCLA 106 Order for for the St. Regis/Cass Lake Site	
2	01/24/95	Muno, W., U.S. EPA	Ross, T., Champion International Company	Unilateral Administrative Order re: the St. Regis Paper Company Site w/ Cover Letter	
3	01/01/95	Barr Engineering Company	U.S. EPA	1994 Annual Monitoring Report for Groundwater & Surface Water Monitoring at the St. Regis Paper Company Site	
4	01/27/95	MPCA	Public	Five-Year Review Report for the St. Regis Paper Company Site	
5	04/06/95	Muno, W., U.S. EPA	Warner, J., MPCA	Letter re: U.S. EPA's Approval of the March 1995 Five-Year Review Report for the St. Regis Paper Company Site	
6	06/01/95	Champion International Corporation	U.S. EPA & Leech Lake Band of Chippewa	Report: Discussion of Site Investigation Information Relevant to Five-Year Review Issues for the St. Regis Paper Company Site	
7	01/01/96	Barr Engineering Company	U.S. EPA	1995 Annual Monitoring Report for Groundwater & Surface Water Monitoring at the St. Regis Paper Company Site	
8	01/01/97	Barr Engineering Company	U.S. EPA	1996 Annual Monitoring Report for Groundwater & Surface Water Monitoring at the St. Regis Paper Company Site	

St. Regis Paper Co. Remedial Site
Update #1
Page 2

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
9	03/01/98	Barr Engineering Company	U.S. EPA	1997 Annual Monitoring Report for Groundwater & Surface Water Monitoring at the St. Regis Paper Company Site	
10	04/13/98	Fields, T., U.S. EPA/ OSWER	Addressees	Memorandum re: Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites (OSWER Directive #9200.4-26)	
11	03/01/99	Barr Engineering Company	U.S. EPA	1998 Annual Monitoring Report for Groundwater & Surface Water Monitoring at the St. Regis Paper Company Site	
12	05/26/99	U.S. DOI/ Bureau of Indian Affairs	Kern, L., U.S. EPA	Letter re: Request for Additional Remedial Investigative Work at the St. Regis Paper Company Site	
13	08/05/99	Ross, T., Champion International Corporation	Jennings, M., Leech Lake Band of Ojibwe	Letter re: Champion's Responses to Trustee Questions for the St. Regis Paper Company Site w/ Attachments	
14	03/01/00	Barr Engineering Company	U.S. EPA	1999 Annual Monitoring Report for Groundwater & Surface Water Monitoring at the St. Regis Paper Company Site	
15	08/24/00	Heinert, R., International Paper	Kern, L., U.S. EPA	Letter re: Project Manage- ment Change for St. Regis Paper Company Site	
16	09/29/00	U.S. EPA	Public	Second Five-Year Review Report for the St. Regis Paper Company Site	
17	03/01/01	Barr Engineering Company	U.S. EPA	2000 Annual Monitoring Report for Groundwater & Surface Water Monitoring at the St. Regis Paper Company Site	
18	07/11/01	Whitman, C., U.S. EPA	U.S. EPA	Memorandum re: U.S. EPA Policy for the Administra- tion of Environmental Programs on Indian Reservations	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
19	08/23/01	Du Bey, R., Short Cressman & Burgess, PLLC	U.S. EPA	Letter re: Leech Lake Band of Ojibwe Petition for Assessment of Release for the St. Regis Paper Company Site w/ Attachments	
20	09/00/01	Exponent	International Paper	Work Plan for the U.S. EPA Non-Time Critical Removal Support Split Sampling and Supplemental Sampling Program for the St. Regis Paper Company Site w/ Attachments A1-A4	
21	2001-2002	Enviro-Test Laboratories	File	Sampling Data for Fish Tissue for the St. Regis Paper Company Site for the Period 2001-2002	
22	07/12/02	Federal Register	Public	Notice: Indian Entities Recognized and Eligible to Receive Services from the United States Bureau of Indian Affairs (FR: Vol. 67, No. 134, 46328- 46333)	
23	08/23/02	Tetra Tech EM, Inc.	U.S. EPA	Data Evaluation Report w/ Appendices A-E and Attachments 1-23 for the St. Regis Paper Company Site	
24	10/11/02	Podowski, A., U.S. EPA	Kern, L., U.S. EPA	Memorandum re: Review of Data Evaluation Report for the St. Regis Paper Company Site	
25	01/24/03	Enviro-Test Laboratories	File	Analytical Report for Samples Received January 24, 2003 for the St. Regis Paper Company Site	
26	01/31/03	Fleming, E., City of Cass Lake	Kern, L., U.S. EPA	Letter re: January 27, 2003 City Council Meeting Concerning Health Risks Connected with the St. Regis Paper Company Site	
27	02/05/03	Muno, W., U.S. EPA	Nordrum, S., Leech Lake Band of Ojibwe	Letter re: U.S. EPA's Proposed Removal Site Evaluation at the St. Regis Paper Co. Site	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
28	02/11/03	Alta Analytical Laboratory	Barr Engineering, Inc.	Analytical Results for One Tissue Sample for the St. Regis Paper Company Site	
29	02/13/03	Nordrum, S., Leech Lake Band of Ojibwe	Muno, W., U.S. EPA	Letter re: U.S. EPA's Proposed Removal Site Evaluation at the St. Regis Paper Company Site	
30	02/21/03	Nordrum, S., Leech Lake Band of Ojibwe	Kern, L. & S. Vega, U.S. EPA	Letter re: U.S. EPA's Proposed Removal Site Evaluation at the St. Regis Paper Company Site	
31	02/21/03	Richards, C., University of Minnesota	Kern, L., U.S. EPA •	Final Report: Assessing and Communicating Risk: A Partnership to Eval- uate a Superfund Site on Leech Lake Tribal Lands	4
32	03/10/03	Kern, L., U.S. EPA	Nordrum, S., Leech Lake Band of Ojibwe	Letter re: Proposed Removal Site Evaluation at the St. Regis Paper Company Site	
33	03/14/03	Drexler, T., U.S. EPA	Nordrum, S., Leech Lake Band of Ojibwe	Letter re: Appropriate Dioxin Cleanup Levels in Soils for the St. Regis Paper Site and Bases of U.S. EPA's Consultation Authority	
34	04/10/03	Yingling, V., Minnesota Department of Health	Drexler, T., U.S. EPA	E-Mail Transmission re: MDH's March 20-21, 2003 Site Visit and Private Well Survey for the St. Regis Paper Company Site	
35	04/16/03	Johnson, M., ATSDR	Drexler, T., U.S. EPA	E-Mail Transmissions re: Testing for Quinoline and Carbazoles at the St. Regis Paper Company Site	
36	04/21/03	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: Reanalysis of Cass Lake Whitefish Sample CL-WH-14 w/ Attachment	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
37	04/21/03	Yingling, V., Minnesota Department of Health	Drexler, T., U.S. EPA	E-Mail Transmission re: Private Well Sampling at the St. Regis Paper Company Site	
38	04/23/03	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA & V. Yingling, MDH	E-Mail Transmission re: Leech Lake Band of Ojibwe's Position Concerning Private Well Sampling at the St. Regis Paper Company Site	
39	04/24/03	Johnson, S., MPCA	Drexler, T., U.S. EPA	E-Mail Transmission re: MPCA's Concurrence with MDH's Recommendation to Shorten the Analyte List for Residences North of the Tracks at the St. Regis Paper Company Site	
40	04/29/03	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: IP's Initial Comments on U.S. EPA's Work Plan for Supplemental Assessment at the St. Regis Paper Company Site	
41	04/29/03	Ross, T., International Paper	Vega, S., U.S. EPA	Letter re: IP's Initial Comments on U.S. EPA's Work Plan for Removal Site Evaluation at the St. Regis Paper Company Site	
42	05/01/03	Nordrum, S., Leech Lake Band of Ojibwe	Vega, S., U.S. EPA	E-Mail Transmissions re: Comments on the Field Sampling Plan for Removal Site Evaluation for the St. Regis Paper Company Site w/ Attachment	
43	05/05/03	Levin, I., U.S. EPA	Drexler, T., U.S. EPA	QAPP Addendum for Acute Toxicity Assessment of the NPDES Discharge from the St. Regis Superfund Site w/ Approval Memo- randum	
44	05/06/03	Fleming, E., City of Cass Lake	Drexler, T., U.S. EPA	Letter re: Cass Lake Citizens' Comments on the Proposed Sampling Plans for Human Health Risk and Removal Site Evaluation for the St. Regis Paper Company Site	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
45	05/07/03	Ross, T., International Paper	Vega, S., U.S. EPA	Letter: IP's Additional Comments on U.S. EPA's Work Plan for Removal Site Evaluation at the St. Regis Paper Company Site	
46	05/08/03	Persell, J., Minnesota Chippewa Tribe	Drexler, T., U.S. EPA	E-Mail Transmission re: Comments on Supplemental Soil Sampling Plan for the St. Regis Paper Company Site	
47	06/02/03	Cullerton, M., Tetra Tech EM, Inc.	Drexler, T., U.S. EPA	Letter re: Surface Soil Samples Collected During the October 2001 Sampling Event at the St. Regis Paper Company Site	
48	06/13/03	Peters, K., Peters & Peters, PLC	Drexler, T., U.S. EPA	Letter re: City of Cass Lake's Comments on IP's June 10, 2003 Work Plan for the St. Regis Super- fund Site	
49	06/16/03	Pena, D., Minnesota Department of Health	Drexler, T., U.S. EPA	E-Mail Transmission re: Comments on IP's Work Plan for the St. Regis Paper Company Site	
50	06/17/03	Steiner, C., U.S. EPA	Drexler, T., U.S. EPA	E-Mail Transmission re: Results of Acute Toxicity Testing for St. Regis WWTP	
51	06/19/03	MPCA	File	MPCA's Comments on IP's Work Plan for Removal Site Evaluation and Supplemental Assessment for the St. Regis Paper Company Site	
52	06/19/03	Persell, J., Minnesota Chippewa Tribe	Drexler, T., U.S. EPA	E-Mail Transmission re: IP's Comments on the Revised Work Plan for the St. Regis Paper Company Site	
53	06/30/03	Vega, S. & T. Drexler, U.S. EPA	Messing, R., Minnesota Department of Health	Letter: US EPA's Response to Comments on IP's Draft Workplan for the St. Regis Paper Company Site	
54	06/30/03	Vega, S. & T. Drexler, U.S. EPA	Johnson, S., MPCA	Letter: US EPA's Response to Comments on IP's Draft Workplan for the St. Regis Paper Company Site	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
55	06/30/03	Vega, S. & T. Drexler, U.S. EPA	Fleming, E., City of Cass Lake	Letter: US EPA's Response to Comments on IP's Draft Workplan for the St. Regis Paper Company Site	
56	06/30/03	Vega, S. & T. Drexler, U.S. EPA	Nordrum, S., Leech Lake Band of Ojibwe	Letter: US EPA's Response to Comments on IP's Draft Workplan for the St. Regis Paper Company Site	
57	07/07/03	Vega, S. & T. Drexler, U.S. EPA	Ross, T., International Paper	Letter: re U.S. EPA's Comments on the June 23, 2003 Version of the Field Sampling Plan for the Removal Site Evaluation at the St. Regis Paper Company Site	
58	07/11/03	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: IP's Comments on U.S. EPA's Split, Co-Located and Indepen- dent Soil and Groundwater Sampling at the St. Regis Paper Company Site	
59	07/18/03	Drexler, T., U.S. EPA	File	Memorandum: Justification for Supplemental Sampling at the St. Regis Paper Company Site	
60	07/18/03	Yingling, V., Minnesota Department of Health	Drexler, T., U.S. EPA	E-Mail Transmission re: Preliminary Review of St. Regis Groundwater Information	
61	07/21/03	Barr Engineering Company	International Paper	Final Report: Residential Well Evaluation - Supple- mental Assessment for the St. Regis Paper Company Site	
62	07/21/03	Persell, J., Minnesota Chippewa Tribe	Drexler, T., U.S. EPA	E-Mail Transmission re: Comments on Data Quality Objectives for IP's Quality Assurance Plan for Sampling and Analysis at the St. Regis Paper Company Site	
63	07/24/03	Muno, W., U.S. EPA	International Paper Company	Unilateral Administrative Order re: St. Regis Paper Company Site	

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTION

ADMINISTRATIVE RECORD
FOR
ST. REGIS PAPER COMPANY SITE
CASS LAKE, CASS COUNTY, MINNESOTA

UPDATE #2
AUGUST 11, 2004

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	00/00/00	Minnesota Department of Health	U.S. EPA	MDH Comments on DQOs and CSM	8
2	02/07/84	Helwig, D., MPCA	Hora, M., MPCA	Memorandum re: PCBs in Sediment from Cass Lake	4
3	01/11/01	Tetra Tech EM, Inc.	U.S. EPA	Trip Report for Sediment, Surface Water, Groundwater, Soil and Fish Sampling Activities	15
4	2002	Leech Lake Band of Ojibwe	File	St. Regis Paper Company Superfund Site Interview -Project (PORTIONS OF THIS DOCUMENT HAVE BEEN REDACTED)	55
5	01/31/02	U.S. EPA/ Region 5 CLP	U.S. EPA	Standard Operating Pro- cedure Acute Static Effluent Toxicity Testing Using Daphnids	58
6	03/20/02	U.S. EPA/ Region 5 CLP	U.S. EPA	Standard Operating Pro- cedure for Chronic Static Renewal Toxicity Testing Using <i>Ceriodaphnia dubia</i> (Revision 009.3)	58
7	03/26/03	Kick, D., U.S. DOA/ Chippewa National Forest	Drexler, T., U.S. EPA	Letter re: Additional Soil Sampling for a Removal Action on Lands Managed by Forest Service	2
8	04/15/03	Johnson, S., MPCA	Drexler, T., U.S. EPA	Letter re: Notification of Change of Project Leader	1

ST. REGIS PAPER COMPANY SITE
PAGE 2

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
9	05/05/03	Levin, I., U.S. EPA	Drexler, T., U.S. EPA	Memorandum re: Approval of the Draft of the Addendum to the Quality Assurance Project Plan for Acute Toxicity Assessment of the NPDES Discharge from St. Regis Superfund Site	21
10	05/23/03	Enviro-Test Laboratories	Persell, J., Minnesota Chippewa Tribe	Letter re: Results for Sample CL-WH-14	5
11	08/01/03	Drexler, T., U.S. EPA	Levin, I., U.S. EPA	Memorandum re: Addendum to Field Sampling QAPP for Chronic Toxicity Testing	1
12	08/28/03	Cullerton, M., Tetra Tech EM, Inc.	Drexler, T., U.S. EPA	Letter re: Data Validation Report for Fish Tissue Analysis	28
13	09/12/03	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	E-Mail Transmission re: Leech Lake Band of Ojibwe Comments on the Data Gaps Sampling Recommendations Tables	2
14	10/22/03	Cullerton, M., Tetra Tech EM, Inc.	Drexler, T., U.S. EPA	E-Mail Transmission re: Tetra Tech Comments on the Leech Lake Band of Ojibwe Pilot Superfund Project Final Draft Report	5
15	11/17/03	Donnelly, P., U.S. EPA	Drexler, T., U.S. EPA	Chronic Toxicity Test Results	4
16	12/00/03	Persell, J., Minnesota Chippewa Tribe for Leech Lake Band of Ojibwe	U.S. EPA	Leech Lake Band of Ojibwe Pilot Superfund Project Final Report	147
17	12/09/03	U.S. EPA	Public	U.S. EPA Original Removal Administrative Record Incorporated by Reference	
18	12/31/03	Wagoner, L., U.S. DOA/ Chippewa National Forest	Drexler, T., U.S. EPA	Letter re: Inclusion of Land Managed by Forest Service in the Removal Action Scoping Sampling	25

ST. REGIS PAPER COMPANY SITE
PAGE 3

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
19	01/09/04	Tetra Tech EM, Inc.	U.S. EPA	Summary of Human Health Exposure Scenarios	24
20	01/16/04	Tetra Tech EM, Inc.	U.S. EPA	Screening Ecological Risk Assessment Draft Technical Memorandum	125
21	01/23/04	Harper, B., AESE, Inc.	Nordrum, S., Leech Lake Band of Ojibwe	Memorandum re: Comments on CSMS	6
22	02/01/04	Cullerton, M., Tetra Tech EM, Inc.	Drexler, T., U.S. EPA	Letter re: Data Validation Report for Reanalysis of Fish Tissue Sample CL- WH-14	8
23	02/02/04	International Paper	U.S. EPA	CD-ROM re: Site Sampling Data for the St. Regis Paper Company Site	
24	02/05/04	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: Data Valida- tion Review from the 2001 Fish Tissue Analysis	7
25	02/19/04	Cullerton, M., Tetra Tech EM, Inc.	Drexler, T., U.S. EPA	Letter re: Responses to IP's Comments on the Data Validation 2001 Fish Tissue Analysis	6
26	03/04/04	Brauner, D., U.S. EPA	Drexler, T., U.S. EPA	Memorandum re: Review of the Draft Human Health and Ecological Risk Assessment Work Plan	3
27	03/08/04	Johnson, S., MPCA	Drexler, T., U.S. EPA	E-Mail Transmission re: MPCA Comments on the Human Health and Eco- logical Risk Assessment Work Plan	5
28	03/08/04	Yingling, V., MDH	Addressees	E-Mail Transmission re: MDH Comments on the Draft Human Health and Ecological Risk Assess- ment Work Plan	14
29	03/10/04	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	E-Mail Transmission re: Comments on the Human Health and Ecological Risk Assessment Work Plan	33

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
30	03/10/04	Persell, J., Minnesota Chippewa Tribe for Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	E-Mail Transmission re: Minnesota Chippewa Tribe Comments on the Draft Human Health and Eco- logical Risk Assessment Work Plan	5
31	03/11/04	Wagoner, N., U.S. DOA/ Chippewa National Forest	Drexler, T., U.S. EPA	Letter re: U.S. DOA's Comments on the Risk Assessment Work Plan, Conceptual Site Models and Preliminary Data Gaps Tables	1
32	03/12/04	Drexler, T., U.S. EPA	Ross, T., International Paper	Letter re: U.S. EPA Comments on the Draft Human Health and Eco- logical Risk Assessment Work Plan	49
33	03/12/04	Drexler, T., U.S. EPA	Ross, T., International Paper, et al.	E-Mail Transmission re: Enviro-Test Laboratories Position on CL-WH-14 Fish Tissue Sample	2
34	03/12/04	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	E-Mail Transmission re: Comments on the Risk Assessment Work Plan, Conceptual Site Models and Preliminary Data Gaps Table	3
35	03/16/04	Eckerly, R., City of Cass Lake	Drexler, T., U.S. EPA	FAX Transmission re: City of Cass Lake Comments on the February 20, 2004 Draft Human Health and Ecological Risk Assessment Work Plan	4
36	03/18/04	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	E-Mail Transmission re: Technical Review Comments on the Human Health and Ecological Risk Assessment Work Plan, Conceptual Site Models and Preliminary Data Gaps Table	8
37	03/31/04	Cullerton, M., Tetra Tech EM, Inc.	Drexler, T., U.S. EPA	Letter re: Data Validation Report for September- October 2002 Fish Sample Analyses	15

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
38	04/05/04	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: IP's Initial Responses to U.S. EPA Comments on the Risk Assessment Work Plan	4
39	04/23/04	Drexler, T., U.S. EPA	Ross, T., International Paper	Letter re: U.S. EPA's Spring 2004 Fish Tissue Sample Collection	2
40	04/28/04	Kirschner, F., AESE, Inc.	Nordrum, S., Leech Lake Band of Ojibwe	Memorandum re: Leech Lake Band of Ojibwe Comments on the Sampling and Analysis Plan for Human Health and Ecological Risk Assessment	8
41	04/28/04	Yingling, V., MDH	Drexler, T., U.S. EPA	E-Mail Transmission re: MDH Comments on the Sampling and Analysis Plan	9
42	05/03/04	Tetra Tech EM, Inc.	U.S. EPA	Sampling and Analysis Plan for Fish Tissue Sampling Activities	152
43	05/10/04	Yingling, V., MDH	Drexler, T., U.S. EPA	E-Mail Transmission re: MDH Comments of Appendix A for the Field Sampling Plan	5
44	05/20/04	Brauner, D., U.S. EPA	Drexler, T., U.S. EPA	Memorandum: Recommen- dations for Effects Levels Benchmarks for St. Regis Site and Summaries of Ecotoxi- cological Effects of Various Constituents of Concern	6
45	06/14/04	Drexler, T., U.S. EPA	File	Memorandum re: Meeting with International Paper Concerning Disposal of Facility Waste Water	1
46	06/18/04	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: IP's Response to U.S. EPA's Proposed Revisions to Risk Asses- sment Sampling and Analysis Plan and Field Sampling Plan	6
47	06/21/04	Drexler, T., U.S. EPA	File	Memorandum re: Brief History of Sewage Treat- ment for City of Cass Lake	1

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
48	06/29/04	Pena, D.,	Drexler, T., U.S. EPA	E-Mail Transmission re: Methods for Estimating Health Risks from Carcin- ogenic Polycyclic Aromatic Hydrocarbons (cPAHs)	8
49	07/01/04	Reiplinger, P., R. Molash & E. Fleming, City of Cass Lake	Drexler, T., U.S. EPA	Letter re: City of Cass Lake Comments on the June 18, 2004 Revised Draft Human Health and Ecological Risk Assess- ment Work Plan	5
50	07/02/04	Persell, J., Minnesota Chippewa Tribe for Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	E-Mail Transmission re: Leech Lake Band of Ojibwe Comments on the Field Sampling Plan and Sampling and Analysis Plan	6
51	07/06/04	Johnson, S., MPCA	Drexler, T., U.S. EPA	E-Mail Transmission re: MPCA Comments on the June 8, 2004 Draft Sampling and Analysis Plan and Appendix A of the Field Sampling Plan for Human Health and Ecological Risk Assessment	2
52	07/06/04	Messing, R.,	Drexler, T., U.S. EPA	E-Mail Transmission re: Comments on the June 8, 2004 Draft Sampling and Analysis Plan for Human Health and Ecological Risk Assessment	8
53	07/12/04	Persell, J., Minnesota Chippewa Tribe for Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	E-Mail Transmission re: Leech Lake Band of Ojibwe Comments on the Draft Appendix B for the Quality Assurance Project Plan for Human Health and Ecological Risk Assessment	3
54	07/16/04	Ross, T., International Paper	Drexler, T., U.S. EPA	E-Mail Transmission re: Split Sampling for Up- coming Risk Assessment	2

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
55	07/29/04	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: IP's Initial Responses to U.S. EPA's Revisions to Risk Asses- sment Documents for the St. Regis Paper Company Site and City Dump Pit Site	3
56	07/30/04	Drexler, T., U.S. EPA	Ross, T., International Paper	E-Mail Transmission re: U.S. EPA's Response to IP's July 30, 2004 Letter Commenting on U.S. EPA's Revisions to Risk Asses- sment Documents for City of Cass Lake Sites	2
57	08/04/04	Drexler, T., U.S. EPA	Ross, T., International Paper	U.S. EPA's Comments on the Human Health and Eco- logical Risk Assessment QAPP for the St. Regis Paper Company Site w/Cover Letter	17
58	08/05/04	Drexler, T., U.S. EPA	File	Memorandum re: Technical Conference Call Between U.S. EPA and IP on the Draft Human Health and Ecological Risk Assessment for the St. Regis Paper Company Site	2
59	08/10/04	Drexler, T., U.S. EPA	Addressees	E-Mail Transmission re: Notes from August 5, 2004 Technical Conference Call Between U.S. EPA and IP	1
60	08/11/04	Karl, R., U.S. EPA	Respondent	Unilateral Administrative Order for Human Health and Ecological Risk Assessment for the St. Regis Paper Company Site	415

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTION

ADMINISTRATIVE RECORD
FOR
ST. REGIS PAPER COMPANY SITE
CASS LAKE, CASS COUNTY, MINNESOTA

UPDATE #3
APRIL 5, 2005

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	03/00/05	International Paper Project Team	U.S. EPA	2004 Annual Report for St. Regis Paper Company and City Dump Pit Site	

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTIONADMINISTRATIVE RECORD
FOR
ST. REGIS PAPER COMPANY SITE
CASS LAKE, CASS COUNTY, MINNESOTAUPDATE #4
SEPTEMBER 29, 2005

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	05/00/03	Contaminants of Potential Concern Committee of the World Trade Center Indoor Air Task Force Working Group	File	Report: "World Trade Center Indoor Environ- ment Assessment: Selecting Contaminants of Potential Concern and Setting Health- Based Benchmarks"	
2	04/05/04	Albrecht, J., U.S. Army Corps of Engineers/ St. Paul District	U.S. EPA	Real Estate Cost Estimate for the St. Regis Paper Company Site	
3	02/08/05	Mattison, T., Barr Engineering Company	Drexler, T., U.S. EPA	Validated Analytical Data for House Dust for the St. Regis Paper Company Site	
4	03/02/05	Mandernach, D., Minnesota Department of Health	Karl, R., U.S. EPA	Letter re: Ongoing Residential Exposures to Dioxins in Contamin- ated Soil and Dust in the Vicinity of the St. Regis Paper Company Facility	
5	03/03/05	Drexler, T., U.S. EPA	Addressees	E-Mail Transmission Forwarding Text and Spreadsheet for U.S. EPA Risk Calculations for the St. Regis Paper Company Site	
6	03/03/05	Johnson, M., U.S. EPA	Drexler, T., U.S. EPA	E-Mail Transmission re: St. Regis House Dust Risk Calculations	
7	03/07/05	Drexler, T., U.S. EPA	Addressees	E-Mail Transmission re: Risk Calculations Performed by U.S. EPA at the St. Regis Paper Company Site w/ Reply History	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
8	03/17/05	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: Technical Comments on U.S. EPA Risk Estimates for Indoor Dust Samples for the St. Regis Paper Company Site	
9	05/06/05	Johnson, S., Minnesota Pollution Control Agency	Drexler, T., U.S. EPA	Letter re: MPCA Con- currence with U.S. EPA Draft St. Regis House Dust Proposed Plan	
10	05/13/05	Drexler, T., U.S. EPA	Ross, T., International Paper	Letter re: U.S. EPA Response to IP's Comments on EPA House Dust Risk Calculations for the St. Regis Paper Company Site	
11	05/13/05	Robinson, R., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	Letter re: Leech Lake Band of Ojibwe Position Concerning the Draft Proposed Interim House Dust Contamination Remedial Action Plan	
12	05/24/05	Drexler, T., U.S. EPA	Ross, T., International Paper	Letter re: Revised St. Regis Paper Company Site House Dust Risk Calculations	
13	06/07/05	Jacobson, L., Registered Professional Reporter	U.S. EPA	Transcript of June 7, 2005 EPA Public Hearing for the St. Regis Paper Company Site	
14	06/23/05	Pena, D. & R. Messing, Minnesota Department of Health	Drexler, T., U.S. EPA	Letter re: MDH Comments on the Interim Plan for House Dust Contamination at the St. Regis Paper Company Site	
15	07/06/05	Lester, S., Center for Health, Environment & Justice	Shimek, R., Indigenous Environmental Network	Letter re: U.S. EPA's Proposed Plan to Cleanup Contaminated House Dust Near the St. Regis Paper Company Site	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
16	07/07/05	Fleming, E., City of Cass Lake	Drexler, T., U.S. EPA	Letter re: City of Cass Lake Comments on U.S. EPA Proposed Short-Term Cleanup Plan for Contam- inated House Dust in Residences Near the St. Regis Paper Company Site	
17	07/08/05	Concerned Citizens	U.S. EPA	Public Comments Received June 23 - July 8, 2005 on the Interim ROD for the St. Regis Paper Company Site (PORTIONS OF THESE DOCUMENTS HAVE BEEN REDACTED)	
18	07/08/05	Johnson, S., MPCA	Drexler, T., U.S. EPA	Letter re: MPCA Comments on U.S. EPA's House Dust Proposed Plan for the St. Regis Paper Company Site	
19	07/08/05	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	Letter re: LLBO Comments on the U.S. EPA House Dust Proposed Plan for the St. Regis Paper Company Site	
20	07/08/05	Ross, T., International Paper	Drexler, T., U.S. EPA	Letter re: IP Technical Comments on U.S. EPA's Proposed Plan for House Dust Contamination at the St. Regis Paper Company Site	
21	07/08/05	Shimek, R., Indigenous Environmental Network	Drexler, T., U.S. EPA	Letter re: IEN Comment on the House Dust Contamination Proposal at the St. Regis Paper Company Site w/ Attach- ment	
22	08/18/05	Tri-Service Automated Cost Engineering System (TRACES)	File	Engineer Estimate for St. Regis Paper Company Site - Leech Lake Reservation	
23	09/23/05	Johnson, S., MPCA	Drexler, T., U.S. EPA	E-Mail Transmission re: MPCA Comment on the Proposed ROD for the St. Regis Paper Company Site	

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
24	09/23/05	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	Letter re: LLBO Comments on the U.S. EPA Draft Document "Interim Action Decision" Concerning House Dust Contamination at the St. Regis Paper Company Site	
25	09/28/05	U.S. EPA	Public	Third Five-Year Review Report for the St. Regis Paper Company Site	
26	00/00/00	U.S. EPA	File	Information Sheets from Environmental Dust Control and Minnesota Soybean re: Road Dust Control Options for the St. Regis Paper Company Site	
27	00/00/00	U.S. EPA	Public	Interim Record of Decision for the St. Regis Paper Company Site (PENDING)	

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTION

ADMINISTRATIVE RECORD
FOR
ST. REGIS PAPER COMPANY SITE
CASS LAKE, CASS COUNTY, MINNESOTA

UPDATE #5
NOVEMBER 16, 2005

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	00/00/00	U.S. EPA	File	World Trade Center Indoor Dust Cleaning Program, Cleaning Control Scope of Work	10
2	06/00/95	U.S. Dept. Of Housing and Urban Development	File	Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing	58
3	12/00/97	U.S. EPA/OAQPS	File	Guidance for Network Design and Optimum Site Exposure for PM2.5 and PM10	110
4	12/00/97	Battelle	U.S. EPA	Report: Summary and Assessment of Published Information on Determining Lead Exposures and Mitigating Lead Hazards Associated with Dust and Soil in Residential Carpets, Furniture, and Forced Air Ducts (EPA 747-S-97-001)	88
5	12/00/97	U.S. EPA/Office of Pollution Prevention and Toxics	File	Summary and Assessment of Published Information on Determining Lead Exposure and Mitigating Lead Hazards Associated with Dust and Soil in Residential Carpets, Furniture, and Forced Air Ducts	114
6	06/00/00	U.S. EPA/Office of Pollution Prevention and Toxics	File	Basis for Educational Recommendations on Reducing Childhood Lead Exposure	74
7	12/00/02	TerraGraphics/U.S Army Corp of Engineers	IDEQ	Bunker Hill House Dust Pilot Final Remedial Effectiveness Report	140

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
8	08/19/02	Sheldrake, S., & M. Stifelman, U.S. EPA	The Science of the Total Environment	"A Case Study of Lead Con- tamination Cleanup Ef- fectiveness at Bunker Hill" 303 (2003) 105-123	19
9	00/00/04	NADCA	File	Assessment, Cleaning, and Resoration of HVAC Systems ACR 2005	41
10	10/00/04	Stevenson, T., U.S. EPA	<i>Industries of the Future</i> Converse Area New Development	Dust Suppression on Wy- oming's Coal Mine Haul Roads (html version)	111
11	11/15/04	Countess Environmental	Western Governor's Association	WRAP Fugitive Dust Hand- book	42
12	01/28/05	Drexler, T., U.S. EPA	Nordrum, S., Leech Lake Band of Ojibwe	Letter re: U.S. EPA Request for Permitting Information and Basis Statement for the St. Regis Site	4
13	02/04/05	Johnson, S., MPCA	Drexler, T., U.S. EPA	Letter re: Submission of Permitting Information and Statement of Basis for the St. Regis Groundwater Treatment System w/ Attachments	23
14	03/28/05	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	Letter re: LLBO Response to U.S. EPA Request for Permitting Information and Basis Statement for St. Regis Site	4
15	04/05/05	Mangino, M., U.S. EPA	Drexler, T., U.S. EPA	E-Mail Transmission re: Carpet Removal and Pos- sible RCRA Concerns at the St. Regis Paper Company Site	1
16	04/29/05	Drexler, T., U.S. EPA	Nordrum, S., Leech Lake Band of Ojibwe	Letter re: U.S. EPA Responses to LLB Questions Concerning the Draft Discharge Limitations and Monitoring Requirements for the St. Regis Site	3

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
17	07/00/05	Subterranean Research, Inc.	U.S. EPA	Report: Hydraulic Capture Zone Analysis for the St. Regis Paper Company Superfund Site	79
18	08/08/05	Nordrum, S., Leech Lake Band of Ojibwe	Drexler, T., U.S. EPA	Letter re: LLBO Request for Permitting Information and Basis Statement for the St. Regis Superfund Site	4
19	11/11/05	Karl, R., U.S. EPA	International Paper Company c/o R. Rothman, Bingham McCutchen, LLP	Letter re: Notice of Potential Liability for the St. Regis Paper Company Site	2
20	00/00/00	U.S. EPA	Addressees	Unilateral Administrative Order for the St. Regis Paper Company Site (PENDING)	